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NEWS SUMMARY

GENERAL

Lebanon military leaders quit

The Lebanese military Cabinet set up by President Franjieh at the week-end in an effort to stop the fighting between Palestinian guerillas and Lebanese Phalangists resigned yesterday, as firing continued in the streets of Beirut.

The resignation came after the eight-man Cabinet had held its first meeting under the President. Brigadier Nureddin Rifai, the Premier, said his Government had submitted its resignation and the President, accepting it, asked the Ministers to stay in office till a new Government could be formed.

Brigadier Rifai said in his letter of resignation that the military Cabinet came for "a specific mission," and that the next Cabinet's task would be "easier."

On the border with Israel, Lebanese artillery was in action against Israeli guns near the village where Israeli planes had raided the day before. Back Page

'Troops out' Ulster query

Ireland would not comment last night on the statement by the Rev. W. Arklow, one of the Northern Ireland clergymen who negotiated the truce with the Provisional IRA, that Britain was committed to withdrawing from Ulster if the Ulster Convention failed. Back page

Ransom refused

Tanzania rejected the demand for £200,000 and release of two detainees by the kidnappers of four students taken across the border to Zaire, one of whom, the only woman, was freed to deliver their note. President Nyerere's spokesman said one of the detainees was amnestied a month ago but held again yesterday on Mr. Nyerere's orders.

Russians dock in space

Russia's Soyuz 18 cosmonauts made a successful docking yesterday with the Salyut 4 space station in pitch darkness, said Tass. The astronauts began a programme of scientific work which indicated they might be planning a long stay aboard the space station.

Evel bows out

Evel Knievel, the stuntman, was taken to hospital from under his motor-cycle after failing to clear 13 single-decker buses at Wembley. He said: "I will never jump again." His English tour was postponed.

Air strike delayed

The 700 Heathrow maintenance men seeking a £10-a-week rise for work on British Airways TriStar jets flying to Europe decided against a holiday week-end strike but said they would come out from midnight to-morrow unless they had a "satisfactory offer."

Stonehouse move

Extradition proceedings against runaway MP Mr. John Stonehouse, and Miss Sheila Buckley, his secretary, in Melbourne were adjourned till Friday to allow defence counsel to appear before the Victoria Supreme Court. Mr. Stonehouse said later he was ready to return to the U.K. "immediately" but was being prevented by Scotland Yard.

Europe quakes

Earthquakes hit many parts of southern Europe yesterday. Richter scale recordings were high and experts said damage would have been disastrous if inhabited areas had been affected, instead of the Atlantic off Portugal and parts of Turkey.

Briefly . . .

No newspapers are expected in France to-day because of a 24-hour strike by print workers against a move to publish the strikebound Parisien Libéré in Belgium.

Arnold Palmer shot a final-round 71 to win the Penfold PGA Championship by two strokes from Irishman Eamonn Darcy. Ben Wright, Page 2

Weekly £50,000 premium bond prize was won by the owner of No. 13ZW 697377, living in Sunderland.

Bomb scare stopped racing at Sandown for half an hour, but nothing was found.

Youth was questioned after a man was killed by stabbing at a North Kensington club.

President Amin announced a new formal dress for Ugandan men—long-sleeved safari suit with scarf bearing national coat-of-arms.

BUSINESS

West may seek new talks with oil States

● THE MAJOR INDUSTRIALISED nations begin an important series of meetings in Paris to-day which are expected to lead to an offer to resume their dialogue with the oil producers and developing countries—though not necessarily on a basis which the latter will accept. Back Page

● CO-OPERATIVE UNION suggests, in proposals to the Trade Department, that worker co-operatives such as the Meriden experiment and some private companies could in the future be incorporated into its Movement. Back Page

● PRESIDENT FORD is expected to announce he is to double the $1-a-barrel tariff on U.S. imported oil in an nationally televised speech on energy policy to-night.

● NEGOTIATIONS for more sales of the European A-300 Airbus are in progress and its manufacturer Airbus Industries. hopes to win orders from five or six new airlines in the next six months. Back Page

Grocery Index rises by 5.02

● FT GROCERY PRICES index went up 5.02 points this month, the biggest rise since last November. Bread, flour, meat, new potatoes and frozen foods were the major categories to push up the Index, which now stands 26 per cent. above its May, 1974, level at 183.41. Page 8

● ELECTRONIC COMPONENTS in certain product categories will revert to the 8 per cent. rate of value added tax, while others remain at the 25 per cent. luxury rate. Page 4

● U.K. ELECTRONICS industry is accused of lax cost consciousness and credit control in a report on the performance of 60 leading manufacturers. Page 4

● STERN GROUP moratorium, to last at least until July 31, 1978, has been drawn up by Mr. Kenneth Cork, liquidator of Wilstar Securities, which effectively controls the group. Page 6

● NATIONAL PRESS Finance Corporation, to buy printing plant for leasing to newspaper publishers as well as administering a newsprint subsidy and a scheme for redistributing advertising revenue, is proposed by the TUC in its recommendations to the Royal Commission on the Press. Page 6

● LIFE ASSURANCE actuaries have been issued with stricter guidelines about their responsibilities and conduct by their professional organisations. Page 4

● BANK of England executive director Mr. C. W. McMahon urged major OECD countries to take steps to reflate their economies at a seminar in Tokyo. Page 5

● NATIONAL SAVINGS continued to attract improved support in April, with preliminary figures showing net receipts of £8.6m. against a net outflow of £7.8m. in April last year. Page 6

● BRITISH AIRWAYS and other international airlines using U.K. airports plan a major drive to eliminate illegal ticket sales. Page 4

Exhibition centre manager resigns

● NATIONAL EXHIBITION Centre general manager Mr. R. A. Cunningham has resigned. Mr. Robert Booth, the chairman, will be taking on additional duties for the time being.

● TURKEY'S foreign trade deficit in the first four months of this year reached a record of more than $1,000m., which is nearly 190 per cent. more than in the same period last year.

● PERIODICAL Publishers Association warned advertising agencies that a situation in which they frequently required extended credit could not continue indefinitely.

● CEDAR LINE cargo service linking Felixstowe, Suffolk with Beirut begins fortnightly operations to-day.

● MOTHERCARE is to extend its children's clothes range into the school age market.

● JESSEL SECURITIES is to receive compensation of just over £3m. for its local holdings in Guyana, which have been nationalised. Page 30

Cabinet split grows as Benn sticks to EEC jobs claim

BY RICHARD EVANS, LOBBY CORRESPONDENT

The deep division in the Government over the referendum campaign widened further yesterday when Mr. Anthony Wedgwood Benn, Secretary for Industry, rejected all criticisms levelled at him by his pro-Market Cabinet colleagues.

Following the outspoken statement by Mr. Denis Healey, Chancellor of the Exchequer, strongly rebutting Mr. Benn's claims that British membership of the EEC had cost 500,000 jobs, the Industry Secretary insisted that, although his figures had been attacked, they had not been effectively challenged.

The clash between Mr. Benn and Mr. Healey increases the prospect of more public in-fighting among Ministers as politicians prepare for the last eight days of the referendum campaign.

There are signs that leading pro-Marketeers are ready to strike back hard at anti-Market Ministers, and behind the statement by Mr. Healey and a week-end speech by Mr. James Callaghan, the Foreign and Commonwealth Secretary, lies a belief that Mr. Benn has been allowed to get away with too much.

Pro-Market Ministers fully realise that they cannot allow to go unchallenged what they regard as Mr. Benn's scare-mongering claims that 500,000 jobs have already been lost and £500m. of capital diverted to Europe because of British membership of the EEC.

Significantly, Mr. Healey's statement was issued by the Treasury without the knowledge of Transport House. Without referring to Mr. Benn by name, it went further than any other Minister has so far gone towards accusing him of lying by the use he has made of official statistics.

The Chancellor, who had hovered discreetly on the sidelines of the campaign to the chagrin of his pro-Market Cabinet colleagues, set out to counter Mr. Benn's claims in strong language.

In particular, he described the pronouncement that £500m. worth of capital had been diverted to Europe as "a falsehood" and added there was no more truth in it than in the "surprising claim" that Britain had lost 500,000 jobs as a result of a deterioration in manufacturing trade caused exclusively by membership of the EEC.

The City and the EEC Page 29
Referendum News Page 11

Asked about Mr. Healey's comments yesterday, Mr. Benn insisted that the figures he had given had not been challenged. The argument was one of interpretation and the figures showed that British entry into the EEC had made the country's problems a great deal worse. He forecast that there would be a continuing deterioration if there was a Yes vote.

He did not propose to attack Mr. Healey personally, and he believed the campaign would continue to be fought without personal references. "I cannot dispute that my figures have been attacked, but they have not been challenged," Mr. Benn declared.

In a prepared statement given at a National Referendum Campaign Press conference, Mr. Benn argued that Britain provided jobs, bought its food and paid its national bills with the cash earned selling its goods abroad.

In the world markets this year Britain was earning nearly £4bn. net in its trade in manufactures but in the Common Market the nation was losing £1bn. "Britain's livelihood depends on us selling our manufactures. If we remain in the Common Market where we buy so much more than we sell we won't be able to pay our bills and we will gradually put Britain on the dole," Mr. Benn declared.

Already, he argued, Britain's trading losses in Europe were damaging our major industries and unemployment was not merely a threat to workers in the steel, textile and car industries. As our national income suffered the blight would spread through shops and offices and even into the public services.

Another Minister to clash openly with Mr. Benn over the week-end was Mr. Callaghan, who said in Midlothian on Sunday that Britain was more likely to benefit from North Sea oil if we stayed in the Community. Earlier, Mr. Benn had argued in a BBC radio interview that the EEC would limit Britain's freedom of operation over the oil.

In Mr. Callaghan's view, leaving the Market would be a set-back to the investment the country would need to take full advantage of the oil supplies. Membership would also mean that more money would be available to meet the heavy costs of development.

In a later speech Mr. Callaghan

Continued on Back Page

Pay rises threat to P.O. finances

BY CHRISTOPHER LORENZ

A DETAILED Post Office report on its rapidly increasing deficit is about to go to the Government, showing that labour costs are rising faster than expenditure on materials.

The report will be extremely controversial in view of recent Government criticism of some PO wage settlements, and because a new increase in telephone charges later this year now appears inevitable, as do either higher prices or a reduced service—or both—on the postal side.

Telephone charges were raised only a month ago by an average of 29 per cent. for residential and 41 per cent. for business users. Postal rates went up sharply in March, by 56/57 per cent. to 7p for first class letters and 5½p for second class.

Post loss

After a deficit of about £300m. in its last financial year (to March 31), the P.O. forecast a loss of £50m. for the current year, if inflation did not worsen. The postal side is now running at a much higher annual rate of loss—though the P.O. will not confirm union estimates of £150m. a year—and the telecommunications service is also running at a loss.

No official figure has yet been put on the likely overall deficit, though it is not currently expected to be as high as the widely speculated £300m.

The last round of price increases has hit traffic on the telephone and postal sides. The PO is expected shortly to begin a television campaign to promote use of the telephone, especially in off-peak periods, and Mr. A. S. C. Currall, head of the PO's postal division, last week warned of further mail cuts, saying that since the March price rise there had been a "significant volume of opinion" that "the services are providing more than is necessary."

Crucial week for four big pay claims

BY ROY ROGERS, LABOUR CORRESPONDENT

FOUR KEY groups of workers will this week seek to match or improve on the 30 per cent. figure which seems to be emerging as the average level of pay settlements as the annual wage round draws to a close.

They will no doubt be spurred on by a 31 per cent. deal concluded over the week-end by 30,000 power engineers and by the knowledge that the Government and both sides of industry are seeking to replace the social contract, which should have meant increases of around 20 per cent.—with something more effective in time for the opening of the next annual round in the autumn.

Railwaymen expect to hear the result of arbitration on their 30 per cent. claim on Thursday. They have rejected as derisory a 21.2 per cent. social contract offer and threaten to consider industrial action if they are not satisfied with the award by the Railway Staff National Tribunal.

Industrial action is also threatened by leaders of 400,000 local government white collar workers unless they receive a "realistic" reply to their demands for 35 per cent. increases at talks on Friday.

Last night Mr. John Daly, national officer of the National and Local Government Officers Association and secretary of the union negotiators, warned that without a reasonable offer staff would "erupt into industrial action seriously affecting services to the community."

Action plans

Contingency plans for official industrial action to support the claim, for £10 across the board plus 15 per cent., were already being drawn up ready for Nalgo's annual conference in two weeks' time, he added.

Meanwhile, in the private sector, Imperial Chemical Industries is due to reply to-day to a 55 per cent. claim from its 60,000 manual workers. Later in the week, the Advisory Conciliation and Arbitration Service is to be asked to conciliate in deadlocked pay negotiations covering 40,000 merchant navy seamen.

The National Union of Seamen has rejected a 30 per cent. package and is sticking rigidly to demands centred on a £40 rate for a 40 hour week which employers maintain would add 81 per cent. to their wages bill. Unless some improvement has been achieved by the time the NUS executive meets next month militant members of the executive are expected to recommend industrial action.

Differentials

Possible strike action by power engineers has, however, been averted. A strike ballot due to have begun to-day has been abandoned following settlement of their pay negotiations after 15 hours of talks over the week-end.

Electrical Power Engineers Association negotiators succeeded in their aim of maintaining differentials over the industry's manual workers. They forced the Electricity Council to lift its previous £20m. offer to £30m. although they did agree a 5 per cent. reduction in staff over the next year to be achieved by way of natural wastage.

Under the 31 per cent. settlement, power engineers receive "new money" increases of between £405 (20.5 per cent.) and £1,705 (25 per cent.) which together with consolidation of £229 cost of living threshold payments already being received give a new salary range of £2,609 to £8,709.

£ in New York

—	May 23	Previous
Spot	$2.3266-3265	$2.3270-3280
1 month	0.95-0.85 dis	0.93-0.86 dis
3 months	2.76-2.66 dis	2.92-2.87 dis
12 months	11.30-11.62 dis	11.60-11.50 dis

EEC to offer Portugal conditional aid

BY REGINALD DALE, COMMON MARKET CORRESPONDENT DUBLIN, May 26.

THE EEC countries to-day decided to make a special effort to help Portugal overcome its difficulties through an offer of closer links with the Community. But the Nine will make it clear to the Lisbon Government, as tactfully as possible, that the offer is conditional on the development of genuine democracy in Portugal.

At their EEC Council session here to-day Ministers agreed to make a rapid response to Lisbon's requests for an extension of its current trade agreement with the Community to include financial and industrial co-operation, as well as a better deal for Portuguese migrant workers in the EEC. At the same time, the Nine will be ready to discuss improvements in the commercial aspects of the existing arrangements which came into force at the beginning of 1973.

Further contacts with the Portuguese will take place in Brussels this Wednesday, at a meeting of the joint committee set up under the trade agreement. On Sunday, Dr. Garret FitzGerald, Irish Foreign Minister and President of the Council, will start a three-day visit to Lisbon to explain the Community's position and seek further details of the Portuguese requests.

The EEC Commission has promised detailed proposals for a negotiating mandate by June 11, and Dr. FitzGerald will also sound out the Lisbon authorities on whether they would like a special Ministerial meeting with the Nine some time in July, as they have already hinted to the Dutch and German Governments.

Dr. FitzGerald will indicate, however, that the Community is making a special concession by offering to go beyond the terms of the existing agreement and that a political response is required from Lisbon in return. Although they did not want to say so too openly here to-day, the Ministers all agreed that the aim must be to help steer Portugal along the path to democracy, and that the offer would be jeopardised by any deviation from that objective.

The hope is clearly that the prospects of closer links with the Community will strengthen the hand of non-Communist forces in Portugal, particularly the Socialist Party, who will be able to argue that there is a viable future for the country as a partner of the other West European democracies.

The Ministers to-day also heard Commission proposals for a new Community political initiative on raw materials aimed at helping the world's poorest countries. M. Francois-Xavier Ortoli, the Commission's president, told the meeting that without such an initiative it would not be possible to conduct a serious dialogue with the oil-producing countries on energy supplies.

The Commission's plan includes the negotiation of product by product agreements, with provisions for stockpiling, financial aid to encourage diversification of production in the developing countries, and more processing of commodities on the spot, as well as a new world-wide system for guaranteeing the export earnings of the poorest countries. All industrial countries, and any others who could afford to, should help to finance the scheme, in the Commission's view.

M. Ortoli said the Community should not try to avoid discussing the indexation of raw material prices, as some producing countries have urged, but insisted that this was not the right solution. Such a system would help the richer countries rather than the poorer ones, he argued.

● Jane Bergerol writes: The Armed Forces Movement's General Assembly met to-day and is thought to have debated the possibility of developing mass participation without using the political parties through workers' revolutionary councils being set up by the extreme left. Page 5

Lock-out takes ITV stations off air again after strike

BY ROY ROGERS, LABOUR CORRESPONDENT

THE DIFFICULTY of guaranteeing balanced referendum campaign coverage in the face of guerilla strike action by technicians was a major element behind the Independent Television Companies' decision to lock out technicians who ended their three-day pay strike yesterday.

As a result of that decision only three of the 15 ITV companies were on the air yesterday and London area programmes, virtually unaffected since Friday, were hit again.

Last night both sides appeared to be in deeply entrenched positions and ready to continue with their trial of strength which could keep most ITV programmes off the air for some time.

Although the Advisory, Conciliation and Arbitration Service has been in touch with both sides over the week-end no meetings have been arranged and the chances of an early settlement look slim. Last week ACAS brought the two sides together for several lengthy sessions of fruitless negotiation.

Tyne Tees Television, based in Newcastle; Westward TV, Plymouth; and Channel were the only ITV stations on the air yesterday and even they suffered from the lack of programmes such as Coronation Street which are normally networked from other stations.

London area programmes, which went out over the week-end when London Weekend Television technicians joined their Tyne, Westward, and Channel colleagues in defying the strike call by the Association of Cinematograph, Television and Allied Technicians, were blacked out again yesterday when Thames TV took over from London Weekend.

The defection of the London Weekend members is likely to figure high on the agenda at a meeting of the ACTT's TV branch to-day.

Last night, Mr. Alan Sapper, ACTT general secretary, said he was astonished at the ITV companies' decision to "spoil" the Bank Holiday programmes after his members had "carefully" timed their strike so they would not be hit.

His members were "100 per cent. angry" at the lock-out decision and he was seeking legal advice as he believed the companies' action was contrary to their responsibilities under the *Independent Broadcasting Authority Act*.

Behind the dispute is ACTT's demand for lump-sum payments of £231 for all 3,500 ITV technicians which the union claims they are owed from the 1973 wage freeze. Management maintains that whatever was owed from that period has been taken care of in subsequent pay settlements and has threatened to continue the lock-out until the demand is dropped.

FEATURES

ON OTHER PAGES

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LOMBARD

The real truth about EEC food

BY C. GORDON TETHER

AS IT is International Women's Year, one might have expected that women in the forefront of public affairs would be making a special effort to show themselves capable of fulfilling the sponsors' main claim—that, given the opportunity, womenfolk can play a much bigger part in promoting the advancement of mankind *in their own individual way*. So it is more than a little sad to see a trio of well-known ladies making a bid to enlist the support of women for the pro-Market cause with a contribution to the "Britain In Europe" frenzy that is of a standard no higher than has characterised the organisation's previous activities.

I am referring, of course, to the current series of pro-Market advertisements appearing under the heading "What every mother in the country should know by June 5" and featuring Marjorie Proops of the Daily Mirror, Katie Boyle, the broadcaster, and Eirlys Roberts, of the Consumers' Association.

This brash piece of pro-Market propaganda concerns itself with promoting two main themes.

All but one

The first is the relationship between the prices that have to be paid for food within the EEC and those at which the same food can be obtained in the outside world. "We believe," say the ladies in a section of the advertisement labelled "Food prices—the truth," that "overall, the price of food in the Common Market is no higher than the price of food in the rest of the world."

It would have been possible to go some way to justifying this "belief" up to a few months ago. But the situation has now fundamentally changed. The world food situation has been fast moving back to normal after the very exceptional conjunction of bad harvests and other disasters which pushed some international prices—though by no means all—beyond Common Market levels in 1974 for just about the first time in the Community's history. The result is that, at the moment, sugar is about the only commodity that costs appreciably less within the EEC than outside it.

It is true that the world situation has so changed that commodity producers will probably be able to insist on getting a better deal in their traffic with the industrialised countries from now on. It may well be that, as the ladies say, "cheap food is a thing of the past." But that certainly doesn't mean that, taking one year with another, it is going to be so much more expensive in the world at large that EEC food will look relatively cheap.

And there is one other thing of considerable relevance to "what every other mother should know" that our three lady personalities omitted to mention. It is that we would have been paying an extra £400m. per annum for our food during the first two years of EEC membership had we not been benefiting from "transitional arrangements" whereby the equalisation of British prices with EEC levels is spread over a number of years.

Fool's paradise

Remembering that guaranteeing high-cost Continental farmers prices that are generous enough to enable them to overcome competition from low-cost producers abroad is what the CAP is all about, British mothers might well feel that the sensible thing is for the country to go on putting its trust in buying food where it is cheapest—the practice that has served it so well for a century and a half.

What, however, of that other argument that has crept into pro-Market propaganda about food since it was discovered that it was becoming much cheaper in the outside world and which inevitably surfaces in "What every mother should know"—that "the world situation is insecure and getting worse because world food production is being outstripped by the population explosion?" Is this the decisive argument for staying with the EEC even if that costs a lot more, that our trio of ladies maintain it is—adding, for good measure, that "already 460m. people cannot get enough food to sustain health?"

In fact, making ourselves exclusively dependent on one region that is highly vulnerable to climatic variations would render us extremely insecure. Far better to spread the net wide enough to minimise such risks. As for the population explosion, the prevalence of under-nourishment has nothing to do with the world's ability to produce more food—it is a product of the poverty problem.

And let it be clearly understood that, if we do fail to devise ways of increasing food output fast enough to cater for all the additional mouths, we are not going to be able to sit in "Fortress Europe" and do ourselves proud while the rest of the world starves. Starving people are desperate people and they are not going to lose much time in clambering over the walls.

THE WEEK IN THE COURTS

The legal impact of the Treaty of Rome

BY JUSTINIAN

THE LORD CHANCELLOR as head of the judiciary and chief spokesman for the legal profession has reaffirmed the belief that constitutional and legal changes wrought by Britain's membership of the Common Market are "within acceptable limits."

He concedes that in time EEC law will have a considerable impact on the common law of England, but that such influence and change are restricted to the areas of economic law, and will not alter, other than marginally, the law touching the daily lives of the ordinary citizen.

The professional view broadly concurs. Indeed, the *Lawyers for Europe* lobby goes further. It insists that the provisions of the Rome Treaty dealing with the harmonisation of commercial law will greatly simplify and encourage trade.

At a time of threatened stagnation in industry this prognosis can hardly be overlooked. But this declaration of faith, as with so many of the pronouncements on the effects of being in or out of Europe, is as yet largely unsupported by any hard evidence. Yet it is possible at this stage, two and a half years after formal entry, to present some evidence that may help towards gauging the validity of the bland assertions made by both protagonists.

Precedent

If the issue over the Common Market does nothing else by way of constitutional and legal change, it has led to the precedent of a referendum, a political instrument hitherto rejected in Britain as a necessary ingredient of democratic Government.

However acceptable this novel constitutional device, the Referendum Act 1975 contains one unnoticed provision that ought not be repeated. It shuts out any access to the courts over any dispute about the count. If time demands the conclusiveness of the result as declared on June 6, the validity of the count at an election ought always to be legally challengeable.

That apart, what impact so far has the Rome Treaty had upon the body of English law? A number of events in and out of the courts serve to indicate the nature and quality of the impact of EEC law. The single, most dramatic change in our law was the judgment of the Court of Appeal last November reversing a 380-year-old rule that an English court could only give judgment for the payment of money in sterling.[1]

All three judges relied upon Article 106 of the Rome Treaty to overturn a positive rule of English law. The majority of the Court, influenced by the power of courts in the member-states of the EEC to order judgment in a foreign currency, held that the English rule no longer applied because the reasons for sustaining it had disappeared.

A later case, *Miliangos v. George Frank (Textiles) Ltd,*[2] involving Swiss currency (and therefore not directly raising the provisions of EEC law) affirmed the reversal of the old English rule. Last week the House of Lords heard the appeal of the English company seeking to reverse the judgment against it expressed in Swiss currency.

Here at least we may be witnessing the impact of the European legal alliance. As Lord Denning put it a year ago at an early stage of the legal battle over the use of the descriptions "champagne cider" and "champagne perry," "the Rome Treaty does not touch any of the matters which concern solely England and the people in it. Those are still governed by English law. They are not affected by the Treaty. But when we come to matters with a European element, the Treaty is like an incoming tide. It flows into the estuaries and up the rivers."[3] Once there, he might have added, the mixed waters may overflow the banks and wash away some of the antediluvian rules of English law.

Another side-effect of the "champagne" decision is the approach English courts have to make in interpreting the Rome Treaty. English judges will have to abandon the principle of applying the precise grammatical sense of a statutory provision and must look to the intent and purpose of the legislation.

Where EEC law does not have direct legal effect in the member-states, but requires to be implemented by United Kingdom legislation, the question arises, what should be the courts' approach? The Select Committee on the Preparation of Legislation, under the chairmanship of Sir David Renton, QC, MP, has formulated two rules. First, any Act of Parliament intended to implement an EEC law should clearly state that it is so intended. And second, that an English judge interpreting the Act of Parliament should take into account the relevant provisions of EEC law. Here again the influence is towards a relaxation in statutory construction and a greater flexibility in finding the true intent of parliamentarians.

The other, more direct influence on our law will come as a result of actual references to the European Court of Justice. There have been a number of attempts to persuade English judges of the necessity for asking the European Court for an opinion on EEC law; only two cases so far have been referred. One of these has been determined.[4] It involved the correct approach of the authorities to exclude in certain circumstances workers from Common Market countries. In that case the European Court ruled that it was permissible not to admit to Britain a Dutch secretary seeking to take up employment with an organisation on the ground that association with an undesirable though lawful organisation, may be socially harmful so as to justify exclusion on grounds of public policy.

An opening

Though EEC law consists principally in a commercial code, here is an opening for the individual to vindicate rights which are unprotected under our constitutional system, devoid of a Bill of Rights. The European Court has affirmed on a number of occasions that it is charged with the duty to protect certain fundamental rights. To the extent that questions, such as the freedom of movement of workers and problems of social security are part of the Rome Treaty and offer opportunities of importing human rights, a legal foundation for the enforcement of human rights exists.

Taken together with the growing influence of the European Commission on Human Rights, a body developed out of the Council of Europe in 1950 to which Britain is a signatory and to whom the individual citizen has had access since 1967, there is a strong impetus towards constitutional innovation.

Lord Hailsham's recently proclaimed conversion to the concept of a Bill of Rights is not wholly induced by internal considerations. The European movement can claim credit for this development. The present Lord Chancellor thus under-rates the extent of the Rome Treaty's impact upon all our daily lives. It is this wider impact beyond the bounds of economic life, that deserves a prominent place in the debate in the forthcoming referendum.

1—*Schorsch Meier GmbH v. Hennin* [1974] 3 W.L.R. 823.

2—[1973] 2 W.L.R. 555.

3—*Bulmer (H.P.) Ltd. v. J. Bollinger SA* [1974] Ch. 401.

4—*Van Duyn v. Home Office* [1975] 2 W.L.R. 760.

GOLF — BY BEN WRIGHT

Palmer beats the gale

A GREAT grey gale off the Goodwin Sands swept over Royal St. George's yesterday and at the end of the Penfold PGA Championship only the strength of the old lion himself, Arnold Palmer, was able to prevail.

The wind dominated everything, even obliterating what had promised to be the ultimate in confrontations: between 23-year-old Eamonn Darcy, trying to win his first major tournament, and the 45-year-old Palmer, golfer extraordinary, who has now won 80 tournaments the world over.

Darcy, however, did not disgrace himself. His second place means £7,650 for him, a place in the Ryder Cup team and a standard of living that before this tournament can have figured only in his dreams.

Palmer was playing two pairs in front and with six holes to play he was one shot behind Darcy. It was at that point that he mounted that old, familiar "charge."

The 13th was dead into the wind and one of the most demanding of all the holes. Palmer hit a drive and then drilled a superb three-wood under the wind and over a bunker that lies short of the green.

It was as far as anybody had got all the day long and when he chipped and single-putted for a par it was no less than he deserved.

Palmer, of course, is an inspirational player and those two shots served to get him going. He hitched up his trousers in that fashion so beloved of his followers and struck an enormous drive down the 14th. A three-iron to the green, finished five feet away and he holed for an eagle.

Later he described the shot as one of the best he had hit in recent years. "Every so often you can see the shape of a shot that you need to play," said Palmer. "This was one of those times. I hooded the face of my three-iron and then just beat it as hard as I could."

He added: "As I was stood on the 15th I thought that I had needed two birdies over the last four holes and that I had just got them." Perhaps only Palmer could have set himself such demanding standards, and the fact that he was able to drop a shot at the 15th showed that he was being unnecessarily harsh with himself.

He still had a little golf to play, however. At the 18th he hit another huge drive and followed it with a seven-iron which ran through the green on the left.

His chip pulled up 8 feet short. He has missed rather too many putts of late but there was no mistake with this one. He finished in 71, for a four-round total of 285 — two ahead of Darcy.

TENNIS — BY JOHN BARRETT

Quality field for Italian Open

ROME, May 26.

THE GIANT marble statues which surround one of the world's largest single centre courts at the Foro Italico cannot watch the tennis any more. Their view is obscured by the gaunt tracery of scaffolding which supports the 2,400 extra seats to accommodate the growing army of supporters who love the drama and suspense of the Italian Open, this first major European championship of the year.

During last week-end's qualifying tournament no less than 6,000 paying customers gave these tense matches the true Roman atmosphere.

This £50,000 championship, worth £6,500 to the men's winner and £2,000 to the successful woman (the voices of women's lib have not yet been heard in Rome) has attracted a high-class entry despite the "B" group Grand Prix tournament running concurrently in Dusseldorf this week.

The 64 men are headed by the holder, young Bjorn Borg of Sweden who is still only 18, and last year's beaten finalist Ilie Nastase of Romania who is seeded three, as well as the left-handed Argentinian Guillermo Vilas, a semi-finalist last year who is seeded second.

In fourth place is the formidable Spaniard Manuel Orantes whose confident streak continues. It began with his brave Davis Cup recovery against Roger Taylor, continued with his victory in the Coca-Cola British Hard Court Championships two weeks ago and, on Sunday last, was still flowing when he won the German title in Hamburg with another five-set victory against Jan Kodes of Prague.

There are some notable absentees. Kodes has chosen not to return to the scene of an umpiring incident which led to his questionable disqualification last year. He plays in Dusseldorf instead. John Newcombe (Australia) is on team tennis duty and Arthur Ashe (U.S.) is resting but both are due in Britain early next month for two grass court tournaments.

Another with grass court preparation in mind is Ken Rosewall, at home in Sydney, while Stan Smith (U.S.), a semi-finalist last year, does not want two tough clay court tournaments before Wimbledon and goes for next week's French Championships instead.

Perhaps shrewdest of all is the current world singles leader, Jimmy Connors (U.S.) who paces himself better than most. He has decided to play doubles only in Rome and Paris with his usual partner, Nastase, so that he will be mentally and physically fresh to defend his Wimbledon title.

CRICKET — BY TREVOR BAILEY

Boycott's sad decision

GEOFF BOYCOTT'S request not to be considered for the Prudential World Cup is unimportant and, indeed, he might well have not been chosen for these particular matches anyway. However, as the most accomplished and experienced batsman in the country, he could have exerted considerable influence on England's fight to regain the Ashes later this summer.

In recent years he has probably been hit by fast bowling rather too often for a player of his ability but has endured stoically. Now we shall never know how he would have coped with the formidable combined threat of Lillee and Thompson.

What I find strange and sad about his decision is that anyone, especially from Yorkshire, should not want to play for England in what is bound to be an exciting and dramatic confrontation with Australia. County cricket is great fun, but it can never conjure up the same atmosphere as a Test Match before a capacity crowd. After all, who wants to settle for local rep when there is a chance to star in the West End?

Predictably the selectors have picked Mike Denness to captain England in the World Cup. Mike is well-versed in the special requirements of limited-over cricket, is an attractive batsman (even if not always wholly convincing against pace — Roberts shot him out again on Saturday) and is a brilliant athletic fielder. Thanks to the friendly draw, his team can scarcely fail to reach the semi-final and could, with a little luck, win the series.

My own choice would be the West Indies rather than Australia because they possess so many batsmen capable of destroying an opposing attack, even when supported by defensive fields, and thus putting the game beyond the grasp of the opposition.

Even if Australia do again expose some of the more obvious limitations of English cricket at Test level, there are indications of the start of a revival, though this will not be felt for several seasons.

A number of the counties have brought in young players and never have they been more needed. Somerset, who did so well under Brian Close last summer, have a high percentage of real prospects. Rose, who promised so much two seasons ago, appears to have rediscovered his touch.

Denning is another left-hand bat of character; and Botham, though finding, as so often is the case, his second season more taxing than his first, is an all-rounder to watch. In only his second first-class match, Slocombe batted with considerable distinction against Middlesex, for whom another youngster, Lamb, bowled impressively.

YACHTING — BY ALEC BEILBY

Success for a quarter-tonner

DEAUVILLE, May 26.

THE WHITSUN bank holiday has, for years, been the established time for two important offshore yachting events, the race from Cowes to Deauville, organised by the Royal Southern and Royal London Yacht Clubs, and the North Sea race from Harwich to the Hook of Holland, organised by the RORC and the Royal Maas Y.C.

The British legislative change of the Whitsun week-end took some of the edge off the event for some of the French and Dutch participants, who, with the referendum firmly in mind, wonder what other changes may be in the wind.

The change certainly prevented several French yachts taking part in the Deauville race but the 112 participants had a fast downhill slide in a north-easterly wind, with the smaller yachts having the advantage after a four-hour calm in mid-Channel caused a complete halt early on Saturday leading to a virtual restart of the race.

Overall honours went to Tony Bassadone's little quarter-tonner Extension, while the team prize for the best three aggregate results was won by the Junior Offshore Group.

Bill Turnbull's Hong Kong-registered Ciel V, in Europe for the Admiral's Cup, won the Class I trophy by a mere two seconds from the RORC yacht Griffin IV and was among those that reached Deauville in time to enter the harbour before the 20-foot tide dropped. For many arriving later the situation was saved by the new Port Deauville yacht harbour where a new lock system allowed entrance nearer to low tide than is possible in the old port.

For the rest it was a long uncomfortable wait at anchor in a choppy sea outside the harbour bar for most of Saturday afternoon while the tide turned and those ashore took ample advantage of French hospitality and bars of another variety.

RACING — BY DOMINIC WIGAN

Girandole a must at Sandown

IF, AS I expect, *Girandole* emphatically wins this afternoon's Henry II Stakes (3.10) at Sandown, he will probably provide the chief threat to the formidable French challenge in the Ascot Gold Cup in three weeks.

Trained at Newmarket's Beech Hurst stable by Blue Cashmere's handler, Michael Stoute (Girandole had a particularly successful campaign last year, winning three competitive handicaps, including the Morland Brewery Trophy at Newbury.

Possibly his best performance came in defeat, however, when he went down by three-quarters of a length to Anji in the Terry's-sponsored Ebor Handicap at York, after putting in a sustained late challenge.

Girandole, a strong bay son of that fine stayer Raise You Ten, who won the Goodwood Cup, has made one appearance this season. Three weeks ago, at Chester, Girandole ran on gamely when running that smart mare, Super Nova, to whom he was conceding 32 lbs., to two lengths in the Ladbroke Chester Cup. That was a particularly good performance from Stoute's four-year-old, and provided that he runs as well here I cannot see him falling.

Zab, a respectable second to Rouser in the Ormonde Stakes at Chester early this month, is suggested as the one for the forecast.

Captain Ryan Price, whose handsome Faberge II colt, Giacometti, failed by half a length to hold Rymer's storming late challenge in yesterday's Brigadier Gerard Stakes, may have better fortune this afternoon with *Photofit* in the Esher Place Handicap (4.10).

This bay colt by Polyfoto out of the unraced mare, Downfall, followed up a short-head victory over Vrondi in a 19-runner maiden race here in April by running second, at two lengths, to Some Night in a competitive handicap at Windsor last week.

With only 7 st. 13 lbs. Photofit can return to winning form by outpacing the highly-rated Peranka from whom she receives 16 lbs., and Gliding, who is thought to have made above average improvement since her two-year-old days.

Two recent seconds, *Yankel* and *Sea Anchor*, are reasonably confident selections to go one better in their respective races the Portsmouth Road Plate (2.35) and the Wheatsheaf Three-Year-Old Plate (4.45).

At Chepstow, where *Algora* can gain an overdue win in the Clifton Stakes (3.0), *Ippolyti* can add to her recent Wolverhampton success by outpacing *Landed Lady* in the Badminton Plate (3.30).

SANDOWN

2.00—Yeoman
2.35—Yankel
3.10—Girandole***
3.40—Sunny Nest
4.10—Photofit*
4.45—Sea Anchor**

CHEPSTOW

2.30—Happy Heart
3.00—Algora
3.30—Ippolyti
4.00—Paveh Star

REDCAR

2.30—African Star
3.00—Nasarulla's Girl
3.30—Baildon

TV/Radio

Because of an industrial dispute some ITV programmes may not appear.

† Indicates programme in black and white.

BBC 1

12.25 p.m. Y Chwarelwr. 12.55 News. 1.00 Pebble Mill. 1.45 Ring-a-Ding. 1.50 Thomas. †3.58 Regional News (except London). 4.00 Play School. 4.25 Huckleberry Hound. 4.30 Pixie and Dixie. 4.35 Jackanory. 4.50 Kim and Co. 5.15 Animal Magic. 5.40 Roobarb.

5.45 News.
†6.00 Nationwide.
6.50 The Little House on the Prairie.
7.40 Sykes.
8.10 Sutherland's Law.
9.00 A Referendum Campaign Broadcast on behalf of Britain in Europe: Why you should vote YES.
9.10 News.
9.35 Chastity, Poverty and Obedience.
10.25 Going Places.
10.55 Midweek.
†11.38 Regional News.

All regions as BBC 1 except at the following times:

Wales—5.15-5.40 p.m. Bilidowcar. 6.00-6.50 Wales To-day. 6.50-7.10 Heddiw. 7.10-7.40 Y Gwydonwyr Ifainc. 7.40-8.10 Dad's Army. 10.25-10.55 Folk Scene. †11.38 News of Wales.

Scotland—6.00-6.15 p.m. Reporting Scotland. 6.15-6.25 General Assembly Report. †6.25-6.55 Nationwide. 10.25-10.55 General Assembly Report. †11.38 Scottish News Summary.

Northern Ireland—3.58-4.00 p.m. Northern Ireland News. 6.00-6.50 Scene Around Six. 10.25-10.55 Sounding Voices. †11.38 Northern Ireland News Headlines.

England—6.00-6.50 p.m. †Look North (from Leeds, Manchester, Newcastle); †Midlands To-day (from Birmingham); †Look East (from Norwich); Points West (from Bristol); †South To-day (from Southampton); †Spotlight South West (from Plymouth). 10.25-10.55 North (from Leeds) Brass Roots; North West (from Manchester) Ballad of the North-west; North East (from Newcastle) Ballad of Northumbria; Midlands (from Birmingham) The Big Show Place; West (from Bristol) A Question of Money; South West (from Plymouth) Peninsula; South (from Southampton) Market Forum; East (from Norwich) On Camera.

BBC 2

6.40 a.m. Open University.
11.00 Play School.
†5.00 p.m. Open University.
6.40 Model World.
7.05 Open University.
7.30 Newsday.
7.45 The Book Programme.
8.10 The Tribal Eye.
9.00 A Referendum Campaign Broadcast on behalf of Britain in Europe.
9.10 "The Childhood of Maxim Gorki" (classic Russian film).
10.45 News Extra.
11.15 Closedown: Richard Bebb reads "When, in disgrace with fortune and men's eyes," by William Shakespeare.

LONDON

10.55 a.m. Roses Cricket. 12.00 Rainbow. 12.15 p.m. Matt and Gerry Ltd. 12.30 Roses Cricket. 1.00 First Report: News, Common Market, FT index. 1.20 Lunchtime To-day. 1.30 Taste of the South. 2.00 Afternoon Sport: Racing from Sandown Park and Roses Cricket. 4.50 How. 5.20 Roses Cricket.

5.50 News.
6.00 Roses Cricket.
6.05 To-day.
6.35 Crossroads.
7.00 Tuesday Star Movie: "The Biggest Bundle of Them All," starring Edward G. Robinson.
9.00 EEC Referendum.
9.10 Edward The Seventh.
10.10 News.
10.40 World In Action Special: "A Bus Round The Market."
11.40 Checkmate.
12.10 a.m. My Song Is Freedom.

All ITV regions as London except at the following times:

ANGLIA

10.25 a.m. North to [illegible]. 1.25 p.m. Anglia News. 5.35 Cartoons. 6.00 About Anglia. 7.00 Cartoon. 7.35 Mystery Movie: McMillan and Wife. 11.40 Reflection.

ATV MIDLANDS

1.20 p.m. Lunchtime [illegible]. 5.20 The Partridge Family. 6.00 ATV Today including [illegible]. 7.00 Cartoon Time. 7.35 Tuesday Mystery Movie: Columbo. †11.30 [illegible].

BORDER

10.05 a.m. [illegible] health. 10.30 Northern View. 1.25 p.m. Border News. 5.35 Cartoon Time. 6.00 [illegible] News and Lookaround. 7.00 Mr. and Mrs. 7.30 Cartoon Time. 7.35 Film: "Hurricane." †11.40 Border News Summary.

CHANNEL

1.20 p.m. Channel Lunchtime News and What's on Where. 5.35 Cartoontime. 6.00 Report at Six. 7.00 Curtain Raiser. 7.10 Mystery Movie: Hec Ramsey. 9.00 The [illegible] Span. 11.35 Commentaires et Previsions Meteorologiques.

GRAMPIAN

11.10 a.m. [illegible] Decision. 11.30 Regional Documentary. 1.20 p.m. Grampian News Headlines. 5.35 Cartoon Time. 6.00 Grampian News. 6.10 Country Focus. 7.00 The Jim MacLeod Show. 7.30 Cartoon Time. 7.35 TV Movie—McCloud. 11.40 [illegible] Prayers.

GRANADA

9.30 a.m. The Rovers. 3.55 Elephant Country. 10.45 Cartoon. 1.20 p.m. This Is Your Right. 5.20 Crossroads. 6.00 Granada Reports. 6.40 Suspense Movie: "How to Steal a Million" starring Audrey Hepburn and Peter O'Toole. 11.40 Bonck.

HTV

11.30 a.m. Northern View. 1.20 p.m. Report West Headlines. 1.25 Report Wales Headlines. 5.20 Help! 5.25 Crossroads. 6.00 Report West. 6.15 Report Wales. 6.30 The Protectors. 7.00 Winner Takes All. 7.30 The Tuesday Western: "Black Spurs" starring Rory Calhoun.

HTV Cymru/Wales—As HTV General Service except: 1.20-1.25 p.m. Penawdau Newyddion y Dydd. 4.25-4.35 Miri Mawr. 4.35-4.50 Miri Mawr. 6.00-6.15 Y Dydd. 7.00-7.30 Sale of the Century. 10.40-11.40 Cymru a'r Refferendwm.

HTV West—As HTV General Service except: 1.20-1.30 p.m. Report West Headlines. 6.15-6.30 Report West.

SCOTTISH

10.30 a.m. Regional Documentary. 1.25 p.m. Road and Weather Report. 5.20 Professor Kitzel. 5.25 Crossroads. 6.00 Scotland Today. 6.30 Barnaby Jones. 7.30 Feature Film: "They Came from Beyond Space" starring Robert Hutton. 11.40 Late Call. 11.45 Sunny Sailing.

SOUTHERN

10.25 a.m. North to View. 1.20 p.m. Southern News. 5.20 Dodo. 5.25 Crossroads. 6.00 Day By Day. 6.45 Des O'Connor Entertains. †7.25 The Tuesday Film: "The Secret Partner" starring Stewart Granger. 11.40 Night Gallery. 12.10 a.m. Southern News Extra.

TYNE TEES

10.25 a.m. Starting Point. 10.30 Northern View. 5.20 p.m. Castaway. 6.00 To-day At Six. 7.00 New Who Do You Do? 7.30 Betty Boop. 7.35 McCloud. 11.40 Late News Extra. 11.45 A Time for Every Purpose.

ULSTER

10.25 a.m. Hammy Hamster's Adventures on the Riverbank. 10.35 Documentary—Northern View. 1.20 p.m. Ulster News Headlines. 4.48 Ulster News Headlines. 5.20 Wait Till Your Father Gets Home. 6.00 UTV Reports. 7.00 Bedtime Loves [illegible]. 7.30 Tuesday Film: "The Millionairess" starring Peter Sellers and Sophia Loren.

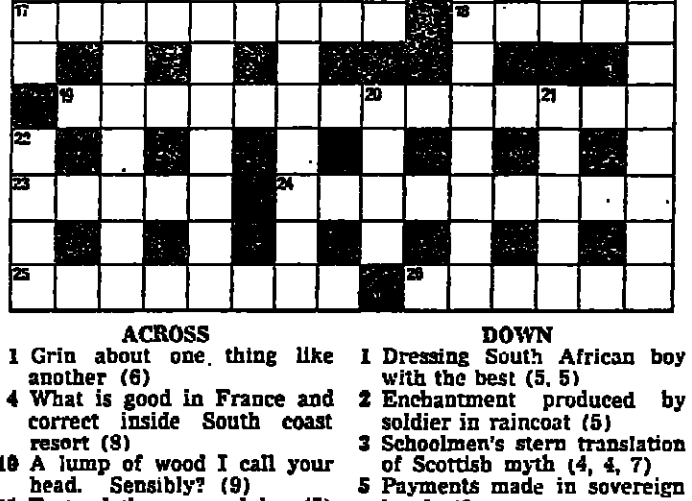
WESTWARD

10.05 a.m. Funky Phantom. 10.25 Northern View. 12.15 p.m. Gus Honeybun's Birthdays. 1.20 Westward News Headlines. 5.35 Cartoon Time. 6.00 Westward Diary. 7.00 Curtain Raiser. 7.10 Mystery Movie: Hec Ramsey. 11.35 Westward Late News. 11.38 Faith for Life.

YORKSHIRE

10.30 a.m. Ed Allen Time. 10.50 Felix The Cat. 1.20 p.m. Calendar News. 5.20 Castaway. 6.00 Calendar. 7.00 New Who Do You Do? 7.30 Cartoon Time. 7.35 McCloud. 11.40 You and Your Golf.

F.T. CROSSWORD PUZZLE No. 2,787



ACROSS

1 Grin about one thing like another (6)
4 What is good in France and correct inside South coast resort (8)
10 A lump of wood I call your head. Sensibly? (9)
11 To tend the grass edging (5)
12 Dispersing proper and improper liars in the capital of Greece (14)
14 Sways on ice (5)
16 Painting distillery with vitality (5-4)
17 A marine leads female force round troops for weapons (9)
18 Race round small pipe like a bird (5)
19 Matters in hand could be hot to the hand (5, 2, 3, 4)
23 Beginning on television (5)
24 Incriminate one Frenchman taking plate holding one cent (9)
25 Mixed like type going to the editor (8)
26 Concurs but needs a long time to accept engineers (6)

DOWN

1 Dressing South African boy with the best (5, 5)
2 Enchantment produced by soldier in raincoat (5)
3 Schoolmen's stern translation of Scottish myth (4, 4, 7)
5 Payments made in sovereign bonds (9)
6 What the barber does for punishment (5, 1, 9)
7 Try insane arrangement to oppress (9)
8 Number the Spanish in season (4)
9 Smear top of lens and rub up round it (4)
13 Bait the point out of courtesy (10)
15 Involves company member on increases (9)
16 In a sense it is to make susceptible to light (9)
20 Get money from oriental ribbon (4)
21 I'm taking a long time in reflection (5)
22 Talk nonsense before a Roman Catholic court (4)

The solution of last Saturday's prize puzzle will be published with names of winners next Saturday.

RADIO 1 — 247m

(S) Stereophonic broadcast

6.00 a.m. As Radio 2. 7.00 Noel Edmonds. 9.00 Tony Blackburn. 12.00 Johnnie Walker including 12.30 p.m. Newsbeat. 2.02 David Hamilton (S) also on VHF. 5.00 Newsbeat. 5.15 Alan Freeman: Youth Club Call. 7.00 As Radio 2 until 12.33 a.m. closedown.

RADIO 2 — 1,500m and VHF

6.00 a.m. News Summary. 6.02 Tony Brandon (S) with The Early Show. 6.15 Pause for Thought. 7.02 Terry Wogan (S). 8.27 Racing Bulletin and 8.45 Pause for Thought. 9.02-11.30 Pete Murray's Open House (S) including 10.30 Waggoners' Walk. 11.30 Jimmy Young (S). 1.45 p.m. A Referendum Campaign Broadcast on behalf of Britain in Europe: Why you should vote "Yes." 1.50 Cricket Scoreboard. 1.55 Good Listening (VHF). 2.02 David Hamilton (S) as Radio 1, but including on 1500m. only (also 202m. Scotland) 2.45, 3.45 and 4.45 Sports Desk. 5.02 Waggoners' Walk. 5.17 Sam Costa (S) including 5.45 Sports Desk. 6.45 Sports Desk. 7.02 Beat the Record. 7.30 Cricket Scoreboard. 7.32 Sing Something Simple (S). 8.02 The Musical World of Laurie Johnson (S). 9.02 The Impresarios (S). 10.02 Sports Desk. 10.05 Colin Berry (S) with Music Through Midnight including 12.00 News. 12.31 a.m. News Summary.

RADIO 3 — 464m, Stereo & VHF

‡ Medium Wave only

7.00 a.m. News. 7.05 Overture: Scarlatti, Paganini, Respighi (S). 8.00 News. 8.05 Morning Concert: Mozart, Beethoven (S). 9.00 News. 9.05 This Week's Composer: Mozart (S). 9.55 Academy of the BBC (S). 10.45 Mendelssohn's Piano Music (S). 11.15 Byrd: Mass for All Saints' Day (S). 12.00 Midday Prom, part 1: Strauss, Tchaikovsky (S). 1.00 p.m. News. 1.05 The Arts Worldwide. 1.20 Midday Prom, part 2: Sibelius (S). 2.10 Music in Our Time (S). 3.05 Melody (S). 4.10 Organ Music (S). 4.55 Jazz To-day (S). 5.25 Pied Piper (S). ‡5.45 Homeward Bound. ‡6.05 News. ‡6.10 Homeward Bound (contd.). ‡6.30 Study on 3. 7.30 Viennese Music, part 1 (S). 8.20 Jacob Bronowski (1908-1974) in conversation. 8.35 Concert, part 2 (S). 9.30 The Female Messiah (S). 10.00 Holst Settings of Humbert Wolfe (S). 11.00 Historic Performance on Record. 11.25 News. 11.30 The Great Debate, part 2: Is Britain part of Europe?

Radio 3 VHF only—5.45-7.30 p.m. and 12.00-1.00 a.m. Open University.

RADIO 4

434m, 330m, 285m and VHF

‡ Medium Wave only

6.40 a.m. Prayer for the Day. 6.45 To-day including 6.50 and 7.50 Your Regional News. 6.55 Weather, programme news. 7.00 News and more of To-day including 7.27 Sportsdesk. 7.35 To-day's Papers. 7.45-7.50 Thought for the Day. 7.55 Weather, programme news. 8.00 News and more of To-day including 8.27 Sportsdesk. 8.35 To-day's Papers. 8.50 A Referendum Campaign Broadcast on behalf of the National Referendum Campaign: Why you should vote "No." 9.00 News. 9.05 Referendum Call. 10.00 News. 10.05 From Our Own Correspondent. 10.30 Daily Service. 10.45 Morning Story. 11.00 News. 11.05 Celebration: Gilbert and Sullivan (S). 11.45 The Wit and Wisdom of . . . Professor Joad. 12.00 News. 12.02 You and Yours. 12.27 Dad's Army. ‡12.55 Weather, programme news. VHF (except London and S.E.) Regional News. 1.00 The World at One. 1.30 The Archers. 1.45 Woman's Hour including 2.00-2.02 News. 2.45 Listen with Mother. 3.00 News. 3.05 The Charterhouse of Parma. 4.00 News. 4.05 Gardeners' Question Time. 4.35 Story Time. 5.00 PM Reports. ‡5.50 Financial Report. VHF Regional News. 5.55 Weather, programme news. 6.00 News. 6.15 My Music (S). 6.45 The Archers. 7.00 News Desk. 7.30 Viennese Music, part 1 (S) (As Radio 3). 8.20 Jacob Bronowski (As Radio 3). 8.35 Viennese Music, part 2 (As Radio 3). 9.30 Kaleidoscope. 9.59 Weather. 10.00 The World To-night. 10.45 A Book at Bedtime. 11.00 The Financial World To-night: Radio 4's International Business Report: Market Trends. 11.15 The Strongest Influence in My Life. 11.30 News.

BBC Radio London

206m and 94.9 VHF

6.00 a.m. As Radio 2. 6.30 Rush Hour. 9.02 Downtown. 11.03 In Town. 12.03 p.m. Call In—1. 12.34 London News Desk. 1.03 Call In—2. 2.03 206 Showcase. 4.03 Matter of Fact. 4.32 Home Run including London News Desk at 5.00-6.00. 7.00 In Town. 8.00 Lobby. 8.30 All That Jazz. 10.03 Robbie Vincent's Late Night London. 12.00 As Radio 2 until closedown.

London Broadcasting

261m and 97.3 VHF

6.00 a.m. "A.M.": news, interviews, traffic and travel news, plus sport, with Douglas Cameron and Clive Roslin. 10.00 Open Line with George Gale. 12.00 Newswatch. 6.00 p.m. Newsbreak. 7.30 London Money Matters—LBC special on the financial front. 9.00-1.05 a.m. Love in London presented by Adrian Love.

Capital Radio

194m and 95.8 VHF

6.30 a.m. Kenny Everett with 2½ hours of music and madness. 9.00 Michael Aspel with music, Features, Advice and Swop-Shop. 12.00 Cash on Delivery with Tommy Vance and Music. 3.00 p.m. Roger Scott with Music. 7.00 London To-day. 7.30 Open Line. 9.00 Nicky Horne's rock show. 11.00 Tony Myatt's late night on Capital. 2.00 a.m. Night Flight.

Sadler's Wells Theatre

Napoli

by CLEMENT CRISP

The Russian classics admit of a variety of presentations, as producers seek to highlight different themes, or approach them with certain artistic axes to grind. In the same way the Danish classics, the Bournonville treasury, can be adapted and re-worked, and for her Gothenburg company Elsa Marianne von Rosen has mounted a new version of the best of these, *Napoli*. Not really new, though, since hers is an attempt at restoring certain passages lost in the recensions made by Hans Beck in the years just after Bournonville's death, and later revised by Harald Lander. Textually this has meant an expansion of the second act in the Blue Grotto and some slighter additions to the last act festivities, but in the main the shape of the choreography is as we know it in the Royal Danes' staging. Where the Gothenburg *Napoli*, seen last week, differs more seriously is in the manner of performing both dances and mime.

It would be unrealistic to expect that this young company could rival the Copenhagen dancers in authenticity of utterance, in capturing that bouncing lightness of movement and rich texture of dramatic playing which we recognise as the Bournonville style; so we have to view the present rather laboured performance more as work in progress than as a finished statement about the ballet's greatness.

One of the problems in staging Bournonville is to strike the happy balance between his veristic observation of the scenes he knew from his travels, and the Romantic style in which he translated them into danced action. The almost brutal truthfulness of Miss von Rosen's opening front-cloth scene is at odds with the fantastication needed for the characters—the vendors, the street-singer—who feature later in the action. These are roles that will benefit from a stronger performance manner: my chief hope for the staging, indeed, is that it will encourage the Gothenburg artists to much fuller-blooded playing and dancing.

In the leading roles last week Lillemor Jonsson made a bright Teresina, and Christer Holgersson a bounding Gennaro. The company worked eagerly in the superb sequence of dances in the last act, and on a larger stage their magnificent patternings and dashing *entrées* probably find the air and space to allow them to breathe and unfold.

Festival Hall

RPO/Foster

by DOMINIC GILL

The Royal Philharmonic Orchestra under Lawrence Foster began their programme on Thursday with Mozart's Haffner symphony K385: a bright, solid, unsubtle account, which also reaffirmed the (perhaps regrettable) practice of omitting the first movement's exposition repeat—even if not demonstrably authentic, a repeat which can surely serve only to strengthen the proportion and dramatic weight (and unconventional quality) of one of Mozart's greatest symphonic first movements: how fine, in any case, to hear so much marvellous music twice!

Of Lalo's *Symphonie Espagnole*, however, Foster left out not merely an arguable repeat but a whole movement. I should not personally, in fact, be greatly offended by the excision of all of Lalo's five movements from any concert programme, since none is particularly memorable. But it could be said that if the *Symphonie Espagnole* is worth doing at all, it is worth giving properly; why leave out such a very pretty little *seguidilla*, which offers no less grateful opportunity for display to the solo instrument than any other part, and provides furthermore some sweet moments of relaxation?

The soloist on this occasion was the young Japanese violinist Mayumi Fujikawa, whose smoothness of voicing, perfect intonation, and general technical skill in commanding all the notes was certainly remarkable. In an odd way, though, she never quite managed to get the expressive nuance, the set and attitude of the music, exactly right—as if the idiom were just a millimetre outside her grasp. The repeated triplet feature of the first movement's melody in particular was rather literally conceived, unlanguorous, unsighing. Brilliant—but not quite convincing.

For their finale, Foster and the RPO played the *Rite of Spring*. It was a relief of a kind to hear Stravinsky's masterpiece intact — though it was not an exciting performance: able enough, but flat, unincisive, without real enchantment or presence. Slow tempi were on the fast side, and fast tempi a little slow.

Bath Festival

Opening concert

by GILLIAN WIDDICOMBE

The Bath Festival opened on Friday, not with a Glock shock to herald Sir William's first year as artistic director, but with a safe, often radiant, all-British performance of the B minor Mass in Bath Abbey. How this year's festival fares under our leading, often outrageous impresario (who, over the years, turned the *Proms* upside down and gave the BBC a good scrubbing) must wait until later. But initially the programmes range from the Monteverdi Vespers to the Fires of London without being too terribly shocking, and sensible modesty prevails. With luck, the opening B minor Mass will be typical, for it was simply excellent.

Charles Mackerras is as much master of Bach as of Handel. Broadcast live on Radio 3, the performance was neither heavy nor too ornamental. Mackerras seems to understand—and far better so than many a more "epic" conductor—the lilt or swing of huge movements such as the opening Kyrie; and naturally he makes the arias warm and predominantly lyrical. The Kyrie was a model of fresh, attentive thinking; yet avoided over-vivid bouncing. Short slurs were observed, letting the air in; but you could always feel the large phrases developing, and the combination of the English Chamber Orchestra and the smallish-sounding Taverner Chorus seemed to be able to sustain sufficient line and tone to keep everything wonderfully even.

On the other hand, when Mackerras chose a legato moulding, it was very smooth indeed; for example, the Qui tollis sounded uncommonly polyphonic, all lines equal; whereas in the Gloria, the Vivace was very sparkling and light-footed.

The soloists were well-led by Helen Watts and John Shirley-Quirk, in fine voice. Felicity Palmer and Robert Tear were both slightly blowsy in attack. Tiny grumbles concerning the broadcast. The chamber organ partials sounded like brakes squealing; more body was needed. And two intervals in the Mass is too many.

'Oh Coward!' for West End

H. M. Tennent Ltd. by arrangement with Wroderick Productions will present *Oh Coward!* a new musical revue with words and music by Noël Coward, in the West End, opening at the Criterion Theatre on Thursday, June 5. It stars Geraldine McEwan, Roderick Cook and Jamie Ross, and is devised and directed by Roderick Cook. There will be public previews from May 28.

The European connection

by DENYS SUTTON, Editor of Apollo

Napoleon once called the English a nation of shopkeepers. It was a sharp comment. But what would he say now? What would he have made of the general quality of the debate about the question of whether or not this country should break its treaty arrangements and leave the EEC?

The discussion about this major question has not been conducted on a very high level. It mainly consists of arguments about the price of food, with an occasional glance at the changes in the legal structure that will result from a closer integration and, to a lesser extent, at sovereignty. Comments by politicians on the last-mentioned matter have a somewhat ironic twist, in view of the existence of the referendum itself, which inevitably diminishes the sovereignty of Parliament.

What has been depressing about the debate so far has been the lack of discussion of the cultural implications of a retreat from the Continent. Little seems to have been said by the main champions on either side about the fact that our culture is fundamentally European. It is a heritage that many treasure. For centuries, we have enjoyed artistic, literary, musical and philosophical links with the Continent.

Do these not count in the argument that we should remain part of Europe? However, to listen to the views of many of the anti-Europeans, these links would seem to be of scant concern, if, in fact, their existence is realised.

Even a cursory examination of English art and architecture underlines that this country owes much to Europe and, in its turn, that we have made our own contribution. What is fascinating within the context of the present debate is that it has been possible for a general style to exist in Europe as a whole—the Romanesque or the Gothic, the Rococo or Neo-Classicism — to which each country has been able to make a significant offering, without necessarily lessening its local characteristics. Does this not provide some indication of how a European system can work? Will not the cross-fertilisation be as valuable now and in the future, as it has been in the past?

One of the most "European" of all periods was the 18th century. Despite wars, England was closely related to France in respect of cultural matters. David Hume was much admired in Paris. Voltaire, a leading spirit of the Enlightenment, derived considerable inspiration from England, which he saw as a land of liberty and progress. This was one way in which we appear to our fellow Europeans.

Voltaire: portrait bust made by Marie-Anne Gollot for Catherine the Great

What would the sage of Ferney have thought of the present threat to the Press occurring in England? It is not hard to imagine that this master of a sharp and virile pen would have castigated the follies of our generation.

It was one instance of the free exchange of artistic ideas in the 18th century that even such a true John Bull as Hogarth did not hesitate to pick up ideas from the engravings of De Troy. It did not make Hogarth less of an Englishman that he was happy to derive material from the Continent.

The connections between England and European culture are too numerous to require emphasis. That they are so rich and varied makes it regrettable that the supporters of our remaining in Europe, to which we belong by tradition and affinities, have not made more of them.

The very absence of such championship of the European ideal makes it all the more obvious, it might be thought, that without the strengthening of such ties, our provincialism and self-satisfaction will increase. The prevalent belief that we are in the throes of a cultural renaissance needs to be taken with some caution.

If we move away from Europe we have a bleak cultural future. We will become increasingly deprived of the stimulus that can be provided by the fertile cultural tradition that exists on the Continent, now as in the past.

Birmingham Rep Studio

O Fair Jerusalem

by MICHAEL COVENEY

David Edgar's new play is extraneously ambitious. The audience sits, chorister-like, on either side of the small nave of a country church. The year is 1348, the first year of the Black Death. A Knight and his Lady are locked in a stultifying marriage; an ebullient yokel discourses cynically on the rapacity of the clergy; a group of vagabond tumblers perform a parable of ugly, Christian righteousness; a young boy at a lectern recites an extract from the Book of Revelation and, as the four apocalyptic horsemen unravel flowing trains around the parish vicar's neck, the vicar himself, stunned by a promise of the Future after purgation, mumbles Christ's last words on Calvary.

The events, as we learn, are being rehearsed by an amateur troupe in 1948. Six hundred years after the plague, the National Health Service is about to be launched. And yet, in the same year, Britain is developing atomic weapons. The play's author, suffering from tubercular meningitis, is spared his life by the discovery of streptomycin; Mr. Edgar proposes, reasonably enough, that medical and technological progress has made life more convenient on the one hand, more horrifying on the other. A 1948 vicar reads from a report published two years previously by the British Mission to Hiroshima and Nagasaki.

Mr. Edgar has virtues as a dramatist, but thrift is not one of them. As a result, the play is frequently indulgent to no great purpose except incidental amusement—as when a virtuosic player (the excellent Derek Fuke) recounts a tale of chivalric competition. Also, and more seriously, there is a confusion as to whether the play should encompass a serious economic argument or not. Act 2 ends strikingly with the figure of an anti-Christ feeding the peasants with sacramental bread and wine, urging them that "all should be held in common" and that the houses of the rich should be appropriated. Stirring stuff, but the scene is only developed most fleetingly, later on, when a small rise in income is mentioned.

Christopher Honer's production has not treated the text with much ruthlessness, so the play rambles perhaps more than it need have done. Natasha Pyne is a very beautiful Lady, Michael Carter a good, singing linkman and David Quilter a chilling Knight as well as a stalwart, blazered thespian.

Sunday nights at the Court

Another season of Sunday night productions at the Royal Court opens next month. The first two, both in the Theatre Upstairs, will be *Moving Clocks Go Slow*, a "space play" by Caryl Churchill, and the second *A 'Nevolent Society* by Mary O'Malley. The first will be played at 7.00 p.m. and 9.30 p.m. on June 15; the second at 8.00 p.m. and 10.00 p.m on July 13.

The season is under the overall direction of Chris Parr, and is presented with financial help from Memorial Enterprises, London Weekend Television and Mrs. Henny Gestetner.

On Sunday June 15 there will also be a concert in the main theatre, by Cleo Laine and John Dankworth; another, by Alan Price, will follow on June 27. These are to help complete the sum of £15,000 wanted for repairing the roof, almost all of which has now been contributed.

Cannes Film Festival

Vintage year

by NIGEL ANDREWS

If film festivals, like wines, have good and bad years, then Cannes 1975 will surely go down as one of the vintage events. The sun shone here for the entire fortnight of the festival, ripening a mood of optimism and enthusiasm that was evident from the beginning. The hotels, the beaches and the sea-front seethed with people looking both busy and happy, and film critics—not usually the most athletic of breeds — were seen dashing with untiring vigour from one cinema to another in an attempt to fulfil impossible viewing schedules.

For once, too, it was no pain for the critic to sequester himself for hours on end in darkened cinemas; coping with poor projection, foreign subtitles, and the stumbling feet and multi-lingual apologies of people going past him in and out of the cinema ("sampling" films being an inescapable habit in a busy festival). There was hardly a day in which some fresh surprise did not emerge from among the new film-makers on view, or in which expectations of an established director's work were not fulfilled. Only a year ago people were reading the last rites over the dying body of international cinema, noting the decline in quality of the films produced, and the decline in the number of the people paying to see them. Now one might think the miracle cure has been effected: with almost indecent haste the patient is back on his feet, and the journalistic prophets of doom have been scattered to the four corners of their newspaper offices.

The remarkable thing about this year's films is that they do not even *look* like the products of an impoverished industry. Wajda's *The Promised Land* and Borowczyck's *Story Of A Sin* are two Polish period pieces which are as opulently staged as they are grandly conceived. Two German films, Werner Herzog's *The Enigma of Kaspar Hauser* and Fassbinder's *Fox*, boast surprisingly high production values coming from an industry so dependent on individual resources and TV sponsorship. And even where shoestring budgets are painfully in evidence—as in the two transatlantic horror quickies *The Parasite Murders* and *The Texas Chain Saw Massacre*—there is a flair and professionalism that papers over the cracks and shows how much can be achieved with how little in the illusionistic art of the cinema.

The new German cinema continues to amaze. Werner Herzog's film about an 18th century foundling who is adopted and educated by a Nuremberg professor is an enthralling mixture of poetry, satire and acid period observation. The hero, Kaspar Hauser, actually existed. Discovered standing in a Nuremberg square one day at the age of 17 (the film makes him older), he was an illiterate, unkempt, half-starved man who claimed to have spent his whole previous life chained in a dark cell without ever seeing the outside world or the brutal man who kept him. From anonymity he soon advanced to an unenviable celebrity: the town curiosity, he was first put on display like an animal in a zoo, later subjected to the over-solicitious attentions of guardians and teachers.

Herzog's film celebrates the absurdities of the confrontation between "natural" man and his over-civilised fellows; but it does it with a gentleness and realism that never keel over into caricature. In sequences like Kaspar's debate with a logician (in which common sense wins out over hair-splitting pedantry), or like Kaspar's dreams, we are made aware of the natural beauty and dignity of man unencumbered by repressed desires or received ideas. And even those who do not wholly subscribe to the Rousseau-esque implications of Herzog's treatment (that education makes as many fools, and spoils as many geniuses, as does illiteracy) can perceive in the film the same poetry, the same black humour and the same immaculate period sense as in Herzog's last work *Aguirre, Wrath of God*.

Fassbinder's *Fox* is another work designed slyly to bait the bourgeois: the story of a sultry leather boy (played by Fassbinder himself) who wins a fortune on a lottery ticket and, taken up by a well-heeled playboy more interested in his money than in his sex appeal, soon finds himself breathing the rarefied air of the homosexual haut monde. The story ends in tragedy, but as always with Fassbinder the characters' woes are distanced by the tone of exotic Hollywoodese in which the story is told. The film is nearer to the highly-wrought artifice of *Petra von Kant* than to the realism of *Fear Eats The Soul*: but the brilliance of Fassbinder's work lies in the continuing dexterity with which he manages to juggle both styles within the framework of a single film.

In the mannerist department, no director can hold a candle to Walerian Borowczyck. After the strenuous kinkiness of *Immoral Tales*, the director's new film is an ornate essay in period melodrama. Made in Poland, *The Story Of A Sin* is the chronicle of a young girl's progress from her strict Victorian upbringing to a love affair with a young man which quickly blossoms into passion, jealousy and a final, heroically grotesque self-sacrifice. The film is a celebration of *amour fou*: completely immoral, completely crazy and yet within the context of love completely logical. Borowczyck makes his usual play with fetishistic objects—shoes, corsets, underwear—but instead of being aimless eroticism they are here subsumed into a credible and organic narrative. The film looks superb — photography by Zygmunt Samosiuk, art direction by Teresa Barska—and I can see no reason why it should not do as well in London as did Borowczyck's highly successful earlier film *Blanche*.

The Entertainment Guide is on Page 10

Wajda's *The Promised Land* inspires less enthusiasm. Sumptuously adapted from a novel by the Polish writer Raymont, it tells of the corruption and class-war antagonisms that were rife during the big industrial boom in Poland in the 19th century; setting its story among the wool and cotton industries of Lodz. Wajda throws everything into the film: wide screen, colour, sweeping camera movements, opulent settings, scenes of fire, scenes of destruction, scenes (gruesome ones at that) of factory mutilations. But virtuosity is not its own reward, and in sacrificing everything at the altar of mise-en-scène Wajda ultimately leaves the political and psychological centre of the story distressingly empty.

Most of the British and American films showing in the main programme this year will be seen shortly in London: *Lenny, Man Friday, The Day of the Locust*. Two, however, deserve an advance mention, if only because they are the kind of films on which a second viewing might easily change one's opinion. Antonioni's *The Passenger* is the story of an American reporter (Jack Nicholson) who changes identity with another man: the new name bringing new obligations, he soon finds himself travelling across Europe as an arms-runner, giving military support to a political struggle of which he himself has only the haziest notion.

The moral hinterland through which the characters move is typical Antonioni: as is the nebulous, uneasy relationship between Nicholson and the girls he picks up during his last journey through Spain (Maria Schneider). What puzzles one about the film—and precipitated, no doubt, the boos that greeted its first showing in Cannes—is Antonioni's injection of cut-rate thriller and travelogue material into a potentially intriguing drama of identity. Here are eye-catching scenes in the African desert, or in Gaudi's Barcelona. Here are cloak-and-dagger scenes of pursuit between Nicholson and his erstwhile wife, Jenny Runacre. Only a second viewing of the film will determine whether the pieces fit together or whether they remain obstinately, irritatingly apart.

Losey's *The Romantic Englishwoman* seems very thin on first viewing: a triangular comedy of manners involving a wealthy and successful writer (Michael Caine), his bored wife (Glenda Jackson) and the young man (Helmut Berger) whom she meets in an hotel lift in Baden-Baden and who follows her out to her Weybridge home, moving in with the couple to become a kind of secretary-cum-lodger. This improbable interloper would seem to have sprung from a Pinter script, but in fact the film was written by Tom Stoppard and Thomas Wiseman, and based on the latter's novel. The first half is very funny—in a bitchy-genteel style reminiscent of *Accident*—but in the second half Losey gets a touch of the Antonions and has his characters whisked off to France to pursue each other through picturesque Mediterranean scenery. The film is beautiful to watch, and witty to listen to, throughout: but from Losey, over the years, one has come to expect a little more.

Jack Nicholson and Maria Schneider in 'The Passenger'

Businessman's Diary

U.K. TRADE FAIRS AND EXHIBITIONS

Date	Title	Venue
June 2—6	National Printing Machinery Exbn.	Olympia
June 2—6	National Wire Exhibition	Belle Vue, Manchester
June 9—11	Minicomputer Exhibition	Regent Centre Hotel, W.1
June 9—13	Small Part Production Exhibition	Birmingham
June 10—11	EIA Engineering Exhibition	Southend
June 10—12	Print Fair	Cunard Intnl. Htl., W.6
June 11—21	Grosvenor House Antiques Fair	Grosvenor House, W.1
June 10—13	Italian Gifts and Fancy Goods Exhibition	Italian Trade Centre, W.1
June 16—17	Provincial Booksellers' Monthly Fair	Kenilworth Hotel, W.C.1
June 17—20	Royal Highland Show	Edinburgh
June 17—20	Microforum International Exhibition	West Centre Hotel, W.6
June 22—26	Contract Furnishing and Interior Design	Olympia
June 23—27	Intnl. Film Technology Exhibition and Conference	Royal Lancaster Hotel, W.2
June 23—27	Euro. Assn. of Radiology Tech. Exbn. and Cong.	Edinburgh
June 30—July 3 .	Royal Agricultural Show	Kenilworth, Warwicks.

OVERSEAS TRADE FAIRS AND EXHIBITIONS

May 28—June 3 .	Mach. and Equip. for Wood Industries	Hanover
May 29—June 8 .	Paris Air Show	Paris
June 3—5	Materials Handling Exhibition	Cincinnati
June 3—8	Mechanical Handling Exhibition	Tokyo
June 3—12	International Fair	Barcelona
June 4—7	Furniture Production Exhibition	Cologne
June 6—12	Sewage and Refuse Engineering Exhibition	Munich
June 8—17	Technical Goods Fair	Poznan
June 9—13	Plastics Show of Canada	Toronto
June 10—13	Hospital Equipment Exhibition	Dusseldorf
June 11—22	International Fair	Lisbon
June 16—22	Laboratory Equipment and Medical Aids Exbns.	Zagreb
June 17—20	International Knitwear Exhibition	Milan
June 17—21	Brit. Export Centre: Camping and Leisure Exbn.	Tokyo
June 17—21	International Education Exhibition	Melbourne
June 17—26	European Machine Tool Exhibition	Paris
June 18—23	International Art Fair	Basle
June 19—22	International Pharmacists' Exhibition	Basle
June 20—24	Music Industry Trade Show	Chicago
June 20—25	Building Materials and Pre-Fabrication Fair	Tehran
June 23—27	International Packaging Exhibition	Brno
June 24—27	Opto-Electronic Systems Exhibition	Munich
June 24—28	Irish Cleaning and Maintenance Exhibition	Dublin

BUSINESS AND MANAGEMENT CONFERENCES

Current	Lond. Grad. Bus. Sch. Corporate Fin. (cl. June 23)	Sussex Place, N.W.1
To-day	Financial Times, Flight International and Air et Cosmos: World Aerospace and Air Defence Industries (cl. May 28)	Paris
To-day	PCL: App. Minicomputer Prog. (cl. May 30)	115, New Cavendish St., W.1
May 28	Eng. Market Res.: Selling Eng. Products	Manchester Bus. School
May 28—30	Guardian Bus. Serv.: Effective Interviewing	21, John Street, W.C.1
May 29—30	IPM: Personnel Statistics	Kingsley Hotel, W.C.1
June 1	W. D. Scott and Co.: Job Evaluation	43, Portman Square, W.1
June 2—4	Assn. Cert. Accnts.: Effective Internal Auditing	Hotel Russell, W.C.1.
June 2—6	PE Cons. Group: Work Study Appreciation	Egham, Surrey
June 2—6	MIP-TV: World Wholesaling Convention	Cannes
June 2—27	Ashridge Man Coll.: Management Development	Berkhamsted, Herts.
June 3—5	Telecommunications '75 Conf. and Exbn.	Metropole, Brighton
June 4	Inst. of Metallurgists: Materials Selection	City of London Poly.
June 4	Staniland Hall: Manpower Costs to 1980	London Hilton, W.1
June 8—10	HTS Man. Centre Interviewing Skills	High Wycombe, Bucks.
June 8—11	SRI-U.K.: Decision Analysis	Royal Berks. Htl., Ascot
June 8—12	BOTB: Special Libraries Assn. Conf.	Chicago
June 9	Coopers and Lybrand: Implementing Equal Pay	Glasgow
June 9—13	Brunel University: Decision Analysis	Uxbridge, Middlesex
June 10	Inst. Works Man.: Health and Safety at Work	Birmingham
June 10—11	Coventry MTC: Industrial Relations	Coventry
June 10—12	Brit. Waterways Board: Freightwaves '75 Conf.	World Trade Centre, E.1
June 11	Henley Centre: Britain to 1985	82, New Cavendish St., W.1
June 11—14	Strategic Man.: Integrated Marketing	Whateley Hall, Banbury
June 12	N.E. Admin. Man.: The Effective Executive	Newcastle upon Tyne
June 14	Goldsmiths' Coll.: Oceanography Conference	Goldsmiths' College, S.E.14
June 18—20	Direct Mail Assn. Annual Conference	Amsterdam
June 19—20	Financial Times, Straits Times, British Airways, Cathay Pacific Airways and Fairplay International Shipping Weekly: South East Asia Shipping	Singapore
June 19—20	Fulmer Res. Inst.: RPD Planning and Design	Slough, Bucks.
June 23—28	Bradford Univ.: Marketing and Logistics Planning	Heaton Mount, Bradford
June 25	Inst. of Marketing: Management by Commitment	London Tara Hotel, W.8
June 25	Chatham House: The International Credit War	RIIA, 10, St. James's Sq., SW1

WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The Board meetings are mainly for the purpose of considering dividends and official indications are not available whether dividends concerned are interims or finals. The sub-division shown below is based mainly on last year's time-table.

TO-DAY

COMPANY MEETINGS—

[illegible]

HOME NEWS

Electronics industry 'lax' in cost and credit control

BY CHRISTOPHER LORENZ

BRITAIN'S ELECTRONICS industry is accused of lax cost consciousness and credit control in a critical new report on the performance of 60 leading manufacturers.

"Whatever other plaudits one can heap onto the industry, acute cost consciousness of management is not one of them," according to Business Ratios, a division of Inter Company Comparisons. "Stock turnover generally is slow by any standards one cares to apply and the length of credit extended to customers is, generally, mind boggling," the organisation claims.

Two-thirds of the companies which were analysed show credit periods of over three months, and a fifth of them longer than four months. "And this in days of such high rates of interest," the authors comment.

Equally significant to the future of the U.K. electronics industry is the statement that "there is no indication that a high level of exports leads to outstanding profitability." Only two out of the top ten exporters (in terms of export ratios to overall sales) are in the top ten of the profitability league (in terms of return on capital). These are English Electric Valve, part of the GEC group, and Racal Electronics.

A further two, Instron and Marconi Instruments (also part of GEC) are in the top 20, but there are as many as four below 30th position: Advance Electronics, Muirhead, Oliver Pell Control, and Foxboro Yoxall, in the 20s are Avo and Electronic Instruments.

The value of sales by companies covered in the report increased by a third in nominal terms over the three-year period 1971-74, with an acceleration in the second half. But Business Ratios says that half the companies recorded sales trends which must have been negative in real terms, and—in this much-vaunted "growth industry"—a "surprisingly large number" showed an actual fall in sales.

Profits growth was on a different trend, rising fast during the first two years when sales grew moderately, followed merely by fast growth when the rate of sales growth accelerated. Total (nominal) profits more than doubled.

Only a comparatively small number of companies appeared to be in a position to maintain consistently high margins, the report states. Many more had no difficulty in maintaining consistently low margins, a third of the companies recording lower margins in the final year than in the second. The average margin rose 60 per cent. from 5 to 8 per cent.

The wide range of ratios of capital usage indicate that a number of companies are utilising their assets "far from effectively," British Ratios says. In spite of an 80 per cent. increase in the average return on capital employed (from comparatively low levels), more than a third of the companies still showed rates of return which "are frankly quite uneconomic."

Business Ratio report on Electronic Manufacturers, published by ICC Business Ratios, 81, City Road, London EC1Y 1BD, price £33.

VAT victory for components makers

BY CHRISTOPHER LORENZ

A GROUP which protested at the "luxury rate" 25 per cent. value added tax on its products has won a major victory.

The Electronic Components Board and the Customs and Excise jointly announced at the week-end that the 25 per cent. rate will in future be applied only to certain product categories, and that others will revert to the old, 8 per cent., rate.

This follows the Board's representations to the Government that the Finance Bill should be amended completely to exclude application of the luxury rate to electronics components.

The compromise agreed by the Board with Customs and Excise foresees application of the higher rate only to components for use in equipment (mainly consumer products) which now also carries 25 per cent. VAT.

After the Budget, the components industry protested that the inclusion of "luxury rated" components in "basic-rated" equipment would cause confusion, as would the ruling that components suitable for luxury-rated equipment would be rated at 25 per cent. even if they were used in products which continue to carry the 8 per cent. rate. Local customs and excise officers gave contradictory interpretations.

The announcement gives a list of components which will carry 25 per cent., and those which will revert to 8 per cent. Unclear individual cases may be taken up by the Components Board with Customs and Excise.

The compromise is seen as an interim measure, since the Government is still officially considering the Board's original representations, but there seems little likelihood of a complete Government backdown if the new system proves workable.

'No danger' to homes in cement

Financial Times Reporter

THE NATIONAL House-Building Council has told home owners not to worry about the potential dangers of high alumina cement.

Following the recent advice issued by the Department of the Environment, the Council has issued a statement attempting to reassure owners of houses containing HAC. It emphasises that 99 per cent. of new home buyers live in houses or flats where it is known that there is no risk and, in the others, there is unlikely to be any significant risk.

A spokesman explained: "Traditionally built houses do not contain HAC except, in some cases, in lintels over door and window openings. The big majority of flats, maisonettes and town houses with structural concrete floors, either do not contain HAC or have spans of under 5 metres and will be of composite construction with other materials not liable to conversion."

The council also says that in the small number of flats where spans exceed 5 metres there is also no cause for current concern. A sub-committee appointed by the DOE will be making a report before the end of July giving advice about whether tests are considered necessary. Over 100 blocks of flats have already been tested and all have proved satisfactory.

Stricter guidelines for life actuaries

BY ERIC SHORT

THE INSTITUTE of Actuaries and the Faculty of Actuaries have jointly issued to all members stricter guidelines concerning the professional responsibilities and conduct of life assurance actuaries.

The difficulties in the life assurance industry over the past 18 months, which resulted in a few companies running into financial trouble, has caused the actuarial profession considerable concern about the position of life assurance company actuaries. The guidelines have been produced by a committee set up last July to consider the whole position of appointed actuaries.

Life company actuaries are appointed under clause 15 of the Insurance Companies Act 1974, and the Department of Trade has to be notified of the appointment and of any change. The Act greatly enlarged the statutory duties of the company actuary. Now he will have to certify at quarterly intervals that assets exceed liabilities and that he has all the necessary information required to sign the certificate.

The first interesting feature of the guidelines is a warning that no one should undertake the role of appointed actuary unless he has the necessary experience. This would seem obvious but the Act does not specify practical experience for this post.

Consultation

The guidelines also warn that potential company actuaries have a professional duty to consult the immediate predecessor to ensure there are no professional reasons why he should not accept the appointment. This would prevent the life company sacking the actuary over a professional disagreement and trying to appoint someone else.

The guidelines are very specific on the role of appointed actuary who is at the same time an employee of the company. He has responsibilities to the Department of Trade and should there be a conflict of interest, then he should warn the company that a certain course of action could prejudice the signing of the quarterly certificate and then he should advise the DoT.

This course of action could cause considerable internal conflict, because as it stands it appears to give the actuary the power of veto over certain courses of action.

The guidelines list the main areas of responsibility of the actuary—premium rates, contract guarantees, investments and investment policy, marketing plans, expenses levels of the company and the extent of the free reserves of the life company.

It deals at length with the actuarial investigations that should be undertaken to satisfy the actuary as to the solvency of the business. Particular emphasis is made of the need for action should these investigations indicate the possibility of insolvency.

In effect, his duty is to monitor all the operations of the company which are significant to its financial soundness and to advise the Board of the financial implications of decisions and of any limits which should be imposed on a course of action if that financial soundness is not to be imperilled.

Final aim

The final aim of the guidelines is to highlight the responsibility of the actuarial profession to ensure that the public is protected by ensuring that all members adhere to proper technical and ethical standards. The guide has made plain a number of matters that up to now have been implicit in the role of a life company actuary rather than explicitly laid down.

The guide also has a few points for actuaries on the Board of life companies, but who are not the appointed actuary. These people own a special responsibility to the appointed actuary, in that not only can they assist the Board in a full understanding of actuarial issues, but that they should never act in a way that would diminish the status of the appointed actuary.

The committee is specific in saying that while it is impossible to draw up absolute rules for actuaries to work from, the guide indicates a framework within which the profession expects appointed actuaries to work at all times.

Failure to do so, unless there are very special reasons, would be regarded as prima facie evidence of unprofessional conduct. In this latter context the Institute of Actuaries recently suspended one of its Fellows for professional misconduct following a complaint from the Secretary for Trade.

Larger engine for Renault 5

A NEW version of the Renault 5 with a larger 1300 engine comes on to the British market this week.

The model, called the Renault 5TS, slots into the upper end of the "5" series, above the 845 cc. 5L and the 956 cc. TL, both of which remain in production.

It also has a higher level of special equipment, and new, specially designed seating. Price of the 5TS is £1,719, including car tax and VAT.

Gallaher puts up prices

GALLAHER is following Imperial Tobacco and raising its cigarette prices by 1p for 20. This means that a packet of Benson and Hedges Special Filter will now cost 47p for 20. At the same time, most pipe tobacco will go up by 1½p an ounce.

The increase comes only five weeks after the Budget put up to 10p on a packet of cigarettes, inevitably causing a fall in demand.

Tobacconists' invoices for stocks will be increased from to-day, but the new prices will not be charged in the shops while present stocks last.

Engineers want new organisation by end of year

BY KENNETH GOODING, INDUSTRIAL CORRESPONDENT

BRITAIN'S professional engineers hope that by the end of the year agreement will have been reached for the setting up of a new organisation to provide them with a powerful voice when dealing with the Government and from which they can develop a new public image.

About 200,000 chartered engineers would be eligible to join the new body.

The move arises from rising frustration, particularly among young engineers, about their status in the community and the fact that the profession has no unified voice in dealing with Government departments.

There is a widespread feeling in the profession that its failure to establish a status comparable with that of doctors and solicitors, for example, is having a damaging effect on recruitment.

The new organisation—probably to be called the Institution of Engineers—would replace the existing Council of Engineering Institutions, set up 10 years ago as a federation of 15 chartered institutions.

The CEI has had some success in establishing common standards of qualification for engineers. But it has been far less successful in its public relations role, mainly because delegates from constituent organisations have to refer back to their own institutions on important matters before coming to any firm conclusion.

The proposals for a new, more powerful body have met with some resistance, particularly from the smaller institutions. At a delegate conference last week, the biggest of the institutions, the 73,000-strong Institution of Mechanical Engineer, gave its president, Mr. Paul Fletcher, a formal mandate to support the idea of a new Institution. But they also made it clear that they wanted no weakening of the learned institutions through lack of financial or other support once the new institution was set up.

The IME delegates also seemed to shy away from the idea that the new body should be a trade union because this might possibly conflict at times with the engineers' code of conduct.

They stressed, however, that the organisation should be powerful enough to defend engineers who refused instructions either of a trade union or employers when these instructions would involve a breach of the code of conduct.

The delegates also stressed they would like to see more effort by the engineering institutions to contact students at schools and universities promote engineering "as an attractive career, as an art as well as a science."

'Save Oxford Union' plea to 43,000

A PLAN to make the Oxford Union a registered charity could kill the society as it has been known for 150 years, it was claimed last night.

Mr. Malcolm Bacchus, who is leading a campaign to stop the scheme going ahead, called on all 43,000 union members to vote in a poll on Thursday which could decide the institution's future.

The scheme has been put forward by a union standing committee in a bid to pay off its £60,000 debts.

It involves handing over the society's premises and property—including listed buildings, the debating hall and the library and books—to a charity to be known as the Oxford Literary and Debating Union.

This would effectively open the society to all Oxford University members and increase its funds through fees.

"We obviously agree with the standing committee's aim of paying off the mounting overdraft, but we do not agree that this is the way it should be done," said Mr. Bacchus.

"In the long term it would leave the union without the firm collateral of its buildings and possessions, which would belong to the charity, and we would then be in real trouble if we got into debt again."

The standing committee argues that a charitable appeal could raise non-taxable funds from any source, and potentially could give the society £750,000.

The secret-ballot starts at 9.30 a.m. on Thursday.

Airlines plan to beat illegal ticket sales

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

A MAJOR campaign to eliminate "bucket shops" trading in the illegal sale of airline tickets is being organised by British Airways and other international airlines using U.K. airports.

An eight-member steering group, chaired by British Airways, is preparing a plan to combat the sale of such tickets through unauthorised outlets.

The airlines estimate that these sales, often made with surplus tickets from tours and sometimes even with stolen tickets, cost them some £40m. a year in lost revenue.

British Airways said the campaign to beat illegal sales is a complex one and will not be easy to solve. But we believe that a solution has to be found otherwise the whole viability of the U.K. travel industry could be jeopardised.

The airline said that thousands of air travellers every year became victims of illegal ticket sales and found themselves stranded overseas. They also lost their money.

The steering group plans to keep the Association of British Travel Agents and the Guild of Business Travel Agents informed of the progress. It will also be in contact with the Department of Trade which has pledged its full support.

CAA revokes Northair operating certificate

THE Civil Aviation Authority has revoked the air operator's certificate held by Northair Air Taxis, the Leeds-based executive air charter group.

The decision to revoke the certificate, said a CAA spokesman, was made after an inspection by CAA inspectors at the Leeds-Bradford airport where Northair has its operational base. The founder of the company, Mr. Ernest Crabtree, a Halifax builder, would not comment on the CAA's action.

Although the CAA declined to give the reasons for its decision to revoke Northair's certificate, a spokesman said: "We have powers under the Air Navigation Order of 1974 to grant certificates if the CAA is satisfied that the applicant is competent, having regard in particular to his previous conduct and experience, his equipment, organisation, staffing, maintenance and other arrangements to operate the kind of aircraft which are specified in the order.

"As these are legal powers our action in revoking the certificate could always be challenged in court so it is not for us to go into the reasons at this stage," said the CAA spokesman.

Shift in computer market widens trade deficit to £135.5m.

BY CHRISTOPHER LORENZ

A SHARP shift in the computer market away from total systems and towards peripheral equipment helped to widen Britain's computer trade deficit by nearly 40 per cent. last year to £135.5m.

Total U.K. sales of computer equipment rose by a nominal 19.5 per cent. in 1974 to £421.7m., according to the latest Department of Industry Business Monitor, but while sales of total systems fell by 10 per cent. to £127.7m., peripheral equipment business soared by 40.5 per cent. to £213.7m.

Exports of systems including central processors were nominally stagnant at just over £63m., but overseas shipments of peripheral equipment rose by 45 per cent. to £116m. Overall exports were up by 30 per cent. to £210.4m. and imports by over a third to £345.9m.

System imports rose by 52 per cent. to £61m. and central processors by almost 17 per cent. to £12.6m. The "other units" section showed a 64 per cent. import increase to £102.8m., and "other parts" a 16 per cent. rise to £174.3m.

The changing structure of the computer market will continue to boost the import bill until the U.K. peripherals industry is strengthened. Together with terminals, they will soon account for 80 per cent. of the hardware cost of a computer system, yet many manufacturers are importing them.

This applies not only to some of the multinationals, but also to ICL itself. The British computer company has been trying to set up a joint peripherals plant in the U.K. with two U.S. companies, NCR and Control Data, in a bid to substitute imports and boost exports, but the project has been seriously delayed.

Conference on Britain's fate

MR. MICHAEL HESELTINE, Opposition front bench spokesman on Industry, will join key speakers from both sides of industry to discuss "Britain's future — the next five years" at a one-day conference organised by the British Institute of Management (BIM) and the Institute of Statisticians, at the London Hilton, on Wednesday, June 18.

Mr. Len Murray, TUC general secretary, and Sir Frederick Catherwood, chairman of BIM council, are among the other major speakers.

OVERSEAS NEWS

New Portuguese bid to end political impasse

BY JANE BERGEROL

LISBON, May 26.

PORTUGAL'S POLITICAL impasse is at the heart of to-day's discussions by the Armed Forces Movement's General Assembly. It is the second time in a week that the 240-man military "parliament" has met to hammer out a solution to the power struggle which has been pitting the AFM against the political parties since the April 25 elections.

At stake is the formulation of another new role for the AFM, which has already shown its flexibility to events and capacity to adapt its original programme to Portugal's changing revolutionary situation.

An all military Government and an end to the present four party plus military coalition cabinet, looks increasingly possible. Lisbon newspapers for the first time to-day have widely commended on this eventuality, many of them from a Communist party viewpoint.

The heart of to-day's debate touches on the "Armed Forces-People Alliance." Essentially, the military are to review the possibilities of building strong mass participation in the country's political, economic and social decision-making without using the political parties. This "solid civilian movement," as it is christened in a working document being presented to the Assembly, could be built up from workers' revolutionary councils, currently being set up in factories and workshops in major industrial centres. The councils bypass all the recognised political parties since they have sprung from grass roots work by the extreme revolutionary Left.

An alternative project for the "solid civilian movement" is the committees for the defence of the revolution. These are being proposed by the Communist Party and would effectively function as Communist Party-manipulated but theoretically popular committees.

Brigadier Otelo Saraiva de Carvalho, chief of military security forces and an outspoken believer in the first model of revolutionary councils, summed the situation up this morning as he entered the General Assembly: "We must take a *final decision. Either we really* build socialism in Portugal using the Armed Forces Movement and the political parties, as long as the parties are able to mobilise the masses, or we abolish the party leaderships and link ourselves directly to the people."

Meanwhile, as another Nato exercise off Portugal's coast approaches, demonstrations are planned to-night by extreme Left groups in favour of national independence and against the Nato alliance. The Nato issue, for the extreme Left, is a means of awakening Portuguese to the revolutionary struggle "just like the spectre of American imperialism helped build Cuban socialism."

Reuter adds from Paris—Portuguese Socialist leader Mario Soares charged in an interview published to-day that the Communist party of Senhor Alvaro Cunhal was Stalinist and threatened detente in Europe.

The Communists "apparently want to chase us from the Government and govern alone or with the military," he said, adding: "The attitude of the Portuguese Communist Party *compromises detente in Europe.*"

Bank of England director advises Japan to reflate

BY CHARLES SMITH, FAR EAST EDITOR

TOKYO, May 26.

AN IMPLIED warning to Japan to reflate its economy and thus enable weaker countries to increase their exports was delivered to-day by Mr. C. W. McMahon, executive director of the Bank of England at an officially sponsored Anglo-Japanese economic seminar.

Mr. McMahon avoided a direct reference to Japan and made it very plain that he was not stating any bilateral grievances arising out of the U.K.-Japan *visible trade deficit. He said,* however, that the smaller member countries of the OECD and non-oil producing developing countries were facing very serious balance of payments problems which would get worse if major OECD countries did not take steps to reflate.

The delay in the launching of reflationary policies in Japan, which is now a subject of criticism from inside Japan itself, has led to a fall in *Japanese imports in the past few* months and to sharply increasing deficits for some of Japan's trade partners in Asia.

In his review of international balance of payments problems, Mr. McMahon said that oil dollar recycling had gone relatively smoothly, partly because the size of oil producing countries' surpluses was turning out smaller than expected. Mr. McMahon put last year's oil surplus at around $70bn. and said that the cumulative total of the surplus in the late 1970s would possibly not exceed $300bn. — as against earlier estimates of $450bn. or *more.*

The Tokyo seminar, officially described as an "Anglo-Japanese dialogue on the world economic crisis," is being held under the sponsorship of the Committee for Invisible Exports and the leading Japanese economic daily, Nihon Keizai Shimbun. The seminar was planned originally as a means of exploring ways to increase U.K.-Japan invisible trade (on which the U.K. earns a substantial surplus) but has been given a wider context because of the world oil crisis.

Lebanon reports second border clash with Israel

SIDON, LEBANON, May 26.

LEBANESE and Israeli artillery were both in action again to-day near the border village of Aita Ash-Shaab, scene of a battle yesterday in which Israeli planes raided Lebanon for the first time in nearly six months.

A military spokesman said a 100-man Israeli force entered the outskirts of the village at 9 a.m. and came under Lebanese artillery fire. "Enemy artillery returned the fire, aiming at one of our positions, to cover the withdrawal of the enemy force to occupied territory," he added. There were no Lebanese casualties.

Local residents said the outskirts of the village came under intermittent shellfire for half an hour, damaging plantations and hitting two houses. But they said no planes were involved in the engagement. There was no reference to aircraft in the military spokesman's statement.

Yesterday an Israeli raiding party killed seven Lebanese soldiers at Aita Ash-Shaab, one kilometre from the border, according to a military spokesman.

Israeli jets also struck at targets along the coast and strafed positions near the village, making their first raids over Lebanon for nearly six months. Reuter

Our Own Correspondent reports from Tel Aviv: An Army spokesman here denied a Lebanese Defence Ministry claim to-day that Israeli troops struck across the frontier at Ait Ash-Shaab for the second day. An Israeli patrol on this side of the border came under apparent Palestinian guerilla bazooka fire overnight, he said, but sustained no casualties.

Smith gives conference ultimatum to the ANC

By Tony Hawkins

SALISBURY, May 26.

IN A HARDLINE speech to-day, Rhodesian Prime Minister Ian Smith delivered an ultimatum to the African National Council to "agree to hold a constitutional conference or say that it is off and give reasons."

If it is the latter, said Mr. Smith, his "Government will then turn to other groups of Africans which have indicated a desire to talk." Rhodesia had prompted the spirit of detente and done everything expected of her, but the ANC had used delaying tactics. "I am tired of being messed around," Mr. Smith said.

Opening the annual congress of the Local Government Association at Inyanga to-day, Mr. Smith launched sharp attacks upon the ANC and the Press. Making it clear that he would reject any British initiative for a conference in London, Mr. Smith said that "the present detente exercise was instigated for one reason — to hold a conference in Rhodesia, for Rhodesians, by Rhodesians, in order to settle our constitutional dispute." Mr. Smith also rejected the argument that the intensification of sanctions — created by the closure of the Mazambique ports next month—would bring Rhodesia to its knees.

Mr. Smith's statement was promptly attacked by the ANC and by a former federal Prime Minister, Sir Roy Welensky in a lunchtime speech. Sir Roy said that Mr. Smith was "absolutely and utterly wrong" to have issued such an ultimatum to the ANC. "This fills me with a great deal of trepidation," he said, adding that he shared the Prime Minister's concern over the behaviour of certain ANC leaders, but it was wrong to say that there would be no conference "if this thing does not succeed at this moment in time." The ANC accused Mr. Smith of distorting the *situation. It repeated that it* will resume talks when the Lusaka terms are fully implemented, warning Mr. Smith that there were no other Africans with whom he could negotiate.

Kuwaiti leader in Paris arms talks

BY RUPERT CORNWELL

PARIS, May 26.

FRANCE'S ECONOMIC and diplomatic ties with the oil-producing countries will be strengthened further by the two-day official visit of Sheikh Sabal al-Salemal-Sabah, the Emir of Kuwait, which started this afternoon.

That both sides attach great importance to the visit is not in question. The Emir was greeted on arrival by President Giscard d'Estaing, and is accompanied by a strong delegation which includes his Finance, Foreign and Defence Ministers.

The most specific discussions are likely to concern arms, and the possibility of further Kuwaiti capital investment in France. French arms salesmen have already won $300m. worth of orders and are well in line to do better still, given the Emir's open ambition to build up his country's military strength.

Much speculation here also surrounds Kuwait's plans for disposing of part of its surplus oil revenues and it is widely assumed that the two leaders will discuss suitable outlets for these funds in France. Already the Gulf State has paid $100m. for a skyscraper in the Defence complex West of Paris.

Diplomatically, the trip can only underline the closeness of the views of France and Kuwait on major oil and Middle Eastern issues. Sheikh Sabah shares much of France's enthusiasm for an Euro-Arab dialogue as well as for the energy conference that President Giscard d'Estaing is trying once more to promote. France, too, seems sure of escaping any new oil embargo by Kuwait, should the Middle East again flare up.

Suez dues rise by 90%

BY MICHAEL TINGAY

CAIRO, May 26.

THE NEW dues for shipping through the Suez Canal announced over the week-end mean a substantial increase in charges, although they are lower than had been expected by some observers in the shipping world.

At a Press conference in Cairo, Mr. Mashour Mashour, chairman of the Suez Canal Authority, made it clear that after consultation with a group of international consultants the charges had been fixed using the oil tankers as the basis of the new category of dues.

The Authority has fixed rates of 1.611 SDR units for each Suez Canal net ton (SCNT) for oil tankers, 1.722 SDR for other cargo vessels, and 1.289 SDR for all unloaded vessels. The Suez Canal net ton is a volume measurement equivalent to 100 cubic feet. In terms of dollars this means the new rates will be at May 1975 rates $2 for the first category, which includes bulk carriers and combined carriers, $2.2 for loaded vessels of other types, and $1.6 for vessels in ballast.

This is effectively an increase of more than 90 per cent. on the rates before the closure of the waterway in June, 1967, when loaded vessels were charged Piastas 43.73 per SCNT and vessels in ballast Piastas 19.94 SCNT. Sterling was in 1967 at Piastas 121, compared with an official rate in May, 1975, of Piastas 91.

Print union calls strike

BY GILES MERRITT

PARIS, May 26.

THERE WILL be no daily newspapers in France to-morrow, following a 24-hour strike call by the country's chief print union. But, ironically, there may be copies available in Paris of just one paper, the "Parisien Libere" popular tabloid that is at the centre of the row responsible for the French Press being strike-bound for the second time in six weeks.

Belgian printers have so far refused to heed the French CGT union's demands that they support the strike begun three weeks ago by printers at "Le Parisien Libere" and for the past four days have been producing the newspaper. Although the tabloid's average daily readership of 1.6m. has been slashed, copies are being trucked down to Paris from Belgium.

To-morrow's general strike has been called with the aim of putting pressure on the French newspaper industry as a whole, in the hope that the other proprietors will persuade the management of "Le Parisien Libere" to drop its Belgian printing operations.

The dispute at "Le Parisien Libere" revolves around management plans to cut heavily into the printing costs of the loss-making newspaper, and it is believed that major redundancies would result. But the paper has continually stressed that unless it can make extensive savings on its present production costs it will be forced to fold.

U.S.-Europe monetary rift feared

BY PAUL LEWIS, U.S. EDITOR

WASHINGTON, May 26.

THE Ford Administration warned this week-end of a new monetary rift between Europe and the U.S. when finance Ministers meet in Paris early next month in an effort to complete the first stage of their monetary reform plans.

Mr. Jack Bennett, the U.S. Treasury Under-Secretary for Monetary Affairs, told a Press conference here that he was pessimistic about the prospects of agreement at the forthcoming Ministerial meeting of the IMF Interim committee in Paris on June 10 and 11.

He cited wide differences of opinion between the U.S. and the Common Market countries over the future role of gold, the "legalising" of floating exchange rates and their respective voting powers in the IMF, adding that if Ministers could not agree then it would be difficult for them to do so in the foreseeable future.

Mr. Bennett made clear that France remains bitterly opposed to *American efforts to phase out* gold's monetary role, by ending gold payments in the IMF, selling off the Fund's own holdings for development aid and only allowing countries to use their gold reserves in a payments emergency.

Greek and Turkish PMs to meet in Brussels

BY OUR OWN CORRESPONDENT

ATHENS, May 26.

GREEK PREMIER Constantine Karamanlis will meet Turkish Prime Minister Suleyman Demirel during the Nato summit conference in Brussels—thus paving the way for a possible solution of the disputes which have brought the two neighbouring countries close to war.

A Government spokesman *said* to-day that the decision to accept a Turkish proposal on the meeting was taken after the Government weighed its usefulness. The exact date of the meeting will be fixed prior to Mr. Karamanlis' arrival in the Belgian capital to-morrow night. The Greek premier is on a two-day official visit to Bucharest.

The Government spokesman said that Mr. Karamanlis will meet President Ford on Thursday. The American President is expected to mediate between the two premiers in an effort to help find compromise solutions to the disputes dividing Greece and Turkey which have badly shaken Nato's south-eastern flank.

Students and police clash in Nairobi

By John Worrall

NAIROBI, May 26.

SHOTS were fired and scores of students arrested in four hours of violence to-day at Nairobi University. Tear gas and batons were used by riot police to break up student meetings and the university campus was cordoned off.

A member of the university staff said that the cause of the riot was the arrest of two students in another disturbance on the campus on Saturday. Nairobi University has been in a state of high tension since the assassination earlier this year of populist MP Mr. J. M. Kariuki, who many radical students regarded as their champion. Last year the university was closed for some five months because of unrest there.

'STARVATION' IN ERITREA

GENEVA, May 26.

THOUSANDS OF people are threatened with death by starvation in the drought-ridden Ethiopian province of Eritrea because the Government is preventing relief supplies entering the region, international church aid officials said here to-day.

Almost no food had been allowed into Eritrea, where secessionist rebels have been fighting Government forces, since the end of January, they said. The officials asked not to be identified since they still hoped that the Ethiopian Government would agree to their aid being allowed in to the province.

Reuter

EEC farm Ministers in fruit talks

BY ROBIN REEVES

LUXEMBOURG, May 26.

THE EEC Council of Ministers was meeting here to-day to discuss Italian demands for improved EEC support measures for its citrous and other fruit and vegetable industries—as the price for its agreeing to more liberal treatment for Common Market imports from the Mediterranean region.

The Community needs to be able to improve its agricultural trade concessions in order to push ahead with negotiations on a trade pact with the Magreb countries, and so burying the row caused by its signing of a preferential trade agreement with Israel. Originally, the two sets of negotiations was supposed to run in parallel, to demonstrate the EEC's neutrality in the Middle East conflict. But negotiations with Israel were completed last December and the deal was signed formally earlier this month. It resulted in strong protests around the Arab world.

The principal British concern in the Mediterranean dossier surrounds an Italian-inspired proposal to establish a common new potato regime. West Germany and Belgium are reportedly now pressing for all potatoes to be covered, a move which could place a question mark over the future of the U.K.'s monopoly marketing board. This is because the new regime proposed does not envisage acreage quotas and intervention support buying which, paradoxically, are key aspects of the British scheme.

After some discussion in the Council, the Commission decided to abandon its new potato plan. Instead it will be bringing forward proposals for a common EEC policy, covering all potatoes, towards the end of the year.

Hope for kidnapped students

DAR ES SALAAM, May 26.

THE UNITED STATES Ambassador to Tanzania, Mr. Beverley Carter, said to-night that he was hopeful that three kidnapped American students would be freed unharmed despite the Tanzanian Government's rejection of the kidnappers' demands.

The students were abducted from a chimpanzee research centre on the Tanzarian shore of Lake Tanganyika by 40 heavily armed men from the guerilla army of the self-styled People's Revolutionary Party (PRP) in Zaire.

Mr. Carter's statement was made as the Dutch and American embassies released the contents of a joint letter from the kidnap victims appealing to the Tanzanian, American and Dutch Governments to save their lives.

Reuter

LABOUR NEWS

TUC calls for State newsprint subsidy

BY ROY ROGERS, LABOUR CORRESPONDENT

A NATIONAL Press Finance Corporation to buy printing plant for leasing to newspaper publishers and administered by a newsprint subsidy and a scheme for redistributing advertising revenue are the main TUC recommendations to the Royal Commission on the Press.

In written evidence submitted to the Commission to-day the TUC suggests 50 per cent. trade union-elected membership of a supervisory board for the proposed NPFC and similar levels of worker participation on proposed supervisory boards for each newspaper.

The main function of the NPFC would be to encourage the growth of new publications, though the TUC says there is no reason why in time it should not own all newspaper printing plant in the country by leasing new plant to national newspapers as their existing plant wears out.

Although the NPFC would represent a public sector stake in the printing industry the TUC emphasises in its evidence that this State stake would be confined to the printing industry and not extended into newspaper publishing.

Explaining the reasoning behind this proposal, the TUC declares that freedom of the Press and diversity can only be fostered if the actual publishing function of the Press is distinguished from the commercial considerations which at present militate against a diverse Press reflecting all shades of national opinion.

In addition to employee representation on the supervisory Board of the MPFC, the TUC also suggests supervisory Boards or trusts for each newspaper.

The Commission is urged to obtain the initial reaction of both sides to such a scheme "having regard to the need for the editor, once appointed by the superviosory Board, to have day-to-day discretion over the contents of the paper."

A call for statutory regulation of the respective proportions of editorial and advertising material in newspapers or periodicals is included in the TUC submission as is a call for the Commission to examine how the Press can improve the U.K. image abroad.

"Biased" reporting of industrial disputes would, says the TUC, leave the "neutral" reader with an image of Britain "perhaps somewhat different from reality." While some people at home could perhaps discount the "gloss" which newspapers put on the facts of a situation, this was not true of foreign readers.

The TUC also favours the establishment of a Communications Council to keep the operation, development and interrelation of all the mass media under permanent review and to make its findings publicly available.

The existing Press Council and the complaints procedures of the BBC and Independent Broadcasting Authority would become sub-committees of the Communications Council.

Meanwhile concern at the growing concentration in the newspaper industry—"eight men control 90 per cent. of Britain's newspapers"—is behind a TUC suggestion that the Fair Trading Act be amended to give the Monopolies Commission power to examine all newspaper mergers, regardless of the circulation figures.

In addition the TUC expresses the hope that the commission will make recommendations for a body, be it the Monopolies Commission or otherwise, to look at the broader issues involved in the concentration of the Press.

Vauxhall warns of more job cuts

By Our Labour Correspondent

VAUXHALL MOTORS, which has shed approaching 3,000 mostly manual workers already this year through voluntary redundancy, has warned union officials that further reductions may be necessary.

No figures have been given but when management meets the Unions again in two weeks time they expect the company to announce plans to reduce the number of supervisory and other white collar grades by up to 10 per cent.

Manual union officials are confident that the severance scheme which coaxed several thousands of hourly-paid workers to leave the Ellesmere Port, Cheshire, plant in return for payments of up to £2,500 for long serving employees, will mean few if any further manual jobs will have to be shed.

But the switch from double to single shift production at Vauxhall plants caused by the industry's recession has left a surplus of supervisory, and other staff grades and voluntary severance to help thin their ranks is anticipated.

Plessey strike continues

By Our Newcastle Correspondent

ABOUT 1,200 workers at the Plessey Telecommunications factory in Sunderland will resume strike action next Monday after a week's Whit holiday.

The men, members of the Amalgamated Union of Engineering Workers, walked out on Friday after the breakdown of pay talks. AUEW officials maintain that management will not negotiate without placing unacceptable conditions on the talks.

Meanwhile following the breakdown of their pay talks, about 1,100 white-collar workers at Plessey Telecommunications of Beeston, Notts., have decided to work to rule and ban overtime pending an official strike ballot.

Blind people face 'major jobs crisis'

BRITAIN'S blind people are facing a major crisis with 45 per cent. out of work and the jobless total rising, according to the National Federation of the Blind. There are 25,000 blind people of working age in the country, yet only 10,000 of these have jobs, it says.

Dr. Fred Reid, the federation's president, told the annual conference at Hull over the weekend: "Of the 10,000 who are in work the great majority are confined to a very narrow range of job opportunities."

Dr. Reid urged Government action to give more and better jobs to blind people—with the right to work given to all handicapped people by the 1980s. He alleged "widespread discrimination" against visually handicapped people as employees.

Talks to-morrow on stable lads' dispute

BY MICHAEL THOMPSON-NOEL IN SANDOWN

HOPES FOR an end to the Newmarket stable lads' strike, now entering its fifth week, may rest on a meeting in London to-morrow between Mr. Sam Horncastle, Newcastle area organiser of the Transport and General Workers' Union, and Lord Leverhulme, senior steward of the Jockey Club.

Until now, the Jockey Club has held aloof from the strike, which is in support of a claim for a £1.47 addition to the lads' consolidated weekly minimum wage of £33.83.

Since the violence at Newmarket at the beginning of the strike when stable lads' pickets clashed with racegoers during the 2,000 Guineas meeting, the strikers have stuck to peaceful picketing and have enlisted the support of television technicians in blacking out coverage of race meetings.

Unless to-morrow's talks achieve a cease-fire, the lads' next major target will be next week's Epsom Derby meeting. The number of lads on strike is said to be between 120 and 220, out of a Newmarket total of around 630.

Mr. Henry Cecil, the trainer of Deerslayer, yesterday's big race winner at Sandown, said 13 of his 36 lads were still on strike.

"It costs about £40 a week to train a horse at Newmarket," said Mr. Cecil. "Owners can't be pushed any further. If we gave in now, owners would switch their horses to other training centres.

"The Government has got to give back enough to racing to help ensure adequate levels of prizemoney. This is the only way we can afford higher wages."

On the other hand, the Newmarket Trainers' Federation has been increasingly criticised for its refusal to allow the dispute to go to arbitration.

During a 30-minute bomb scare at Sandown yesterday, Mr. Cyril Stein, chairman of the Ladbroke group, said television blackouts were causing a 10 per cent. drop in Ladbroke's Saturday betting turnover, which normally averages £1.5m.

Reduced betting turnover means a reduced income for the Horserace Betting Levy Board, which is already in dispute with the bookmaking industry over the scale of the 1976-77 levy.

At present, the Board is receiving just in excess of £8m. a year, though in real terms its income is now falling behind the rate of general inflation.

No sailing for Belfast ferry

FOR THE second night in succession, there was no sailing of the Liverpool boat to Belfast last night, and the Ulster Queen, which should have sailed, was still in Princes Dock, Liverpool, because of an industrial dispute.

About 50 members of the crew, in a dispute over the start of summer sailings, refused to sail on Sunday, and decided to continue their action yesterday.

The company decided to cancel the sailings and intending passengers were advised to travel on the Liverpool-Dublin boat.

Textile men offer pay cut

By Our Carlisle Correspondent

WORKERS AT a troubled yarn spinning company offered to cut their pay by £10 a week to save their factory—but the management turned down their gesture.

The 100 workers at Robert Todd and Sons' mill were almost unanimous in their offer to take lower wages at a meeting held with Mr. Michael Potts, the company's managing director.

But Mr. Potts turned down the idea as he felt wage costs could create problems later. But he said he was greatly moved by the workers' gesture.

The workers, still determined to save the company which is trying to secure a £150,000 short-term government loan, have all signed a petition and set it to Industry Secretary, Mr. Anthony Wedgwood Benn.

Mr. Donald Gribbon, senior shop steward at Todds commented at the week-end "We hope our petition will help to persuade Mr. Benn that our company must be saved. It is as important to Carlisle as British Leyland is to the Midlands. Our workers were even willing to give up some of their pay. We will do anything to help out."

Last week it was announced that a bank had appointed a receiver to manage the company.

Newspaper in second dispute

The Liverpool Daily Post and Echo, already hit by the national dispute involving members of the craft printing unions, has been hit by another dispute, over the dismissal of Mr. Brian Hogan, father of the chapel (shop steward) of SLADE, the process workers, for using bad language.

Last night the pickets were trying to persuade other unions to support them.

Stern Group moratorium proposal

FINANCIAL TIMES REPORTER

PROPOSALS FOR A moratorium, to last at least until July 31, 1978, are embodied in a scheme of arrangement drawn up by Mr. Kenneth Cork embracing 66 companies in the Stern Group. Last June Mr. Cork was appointed liquidator of Wilstar Securities, the company which effectively controls the group.

The Court has directed meetings of creditors of the respective companies to be held in London on June 16 and 17.

In an explanatory statement, Mr. Cork points out that although in the past total assets of the scheme companies have been estimated at upwards of £200m., there is now considerable doubt as to their current worth and it is by no means certain that the proceeds of sale of such properties will be sufficient to discharge fully all the secured creditors.

Because of this situation, a large majority of creditors of the scheme companies, secured and unsecured alike, considered during the summer of 1974 that the best solution for the group's problems would be moratorium so that assets could be realised for the common benefit of all interested, in an orderly manner.

SALEROOM

Sotheby's art sale success in Monte Carlo

By Antony Thorncroft

JUDGING BY the prices at the Sunday night session, Sotheby's first fine art sale at Monte Carlo will prove a great success. But then the articles for disposal are exceptional, being furniture and works of art from two of the most distinguished homes in France—Le Chateau de Ferrières, belonging to Baron Guy de Rothschild, and L'Hotel Lambert, the home on L'Ile St. Louis of the Baron de Redé.

The total for the first sale was £460,000, about £100,000 higher than even the most optimistic estimate, and since this was the least important session the eventual total could be around £2m. One indication of the strength of the demand was that none of the 106 lots remained unsold.

The first session was devoted to small works of art, gold boxes and the like, and the highest price was about £64,000, over double the estimate, given for a South German late Gothic cup and cover, 18½ inches high. It is believed to have been made in Nuremberg in the early 16th century by Ludwig Krug. The buyer was not named.

Other good prices were £26,000 paid by a Spanish dealer for a gold and mother of pearl snuff box made in the mid-18th century; £17,500 by S. J. Phillips of London for a Louis XV three-colour gold cane handle; £16,000 by an American dealer for a set of 30 silver dinner plates made in London around 1720.

CONTRACTS

ICL wins Scottish orders

INTERNATIONAL COMPUTERS has received orders totalling more than £500,000 from two Scottish Regional Councils. Lothian Council has ordered a System 4-72, and Galloway Council a disc-based 2903 computer.

★

BRITISH STEEL CORPORATION'S tubes division has been awarded a contract worth £250,000 for the supply of tunnel segments to be used in the construction of central area stations of the New Tyne and Wear Metro, which is scheduled for completion in 1979.

★

NCR has received an order from Barclays Bank for 100 self-service terminals, which will initially be used for cash dispensing.

TELEPHONE RENTALS has won a contract worth almost £70,000 for the installation of a PABX switchboard at the Old Bailey Branch of Barclays Bank.

★

COMPUTER INSTUMENTATION, Eastleigh, has won a further order, worth almost £25,000, from British Rail for data acquisition system based on CIL's own system 80 650 nanosecond cycle time processor. This is intended for research and development for investigations into track behaviour of trains.

Another £8.6m. boost for National Savings

BY DONALD MACLEAN

NATIONAL SAVINGS continued to attract improved support from investors in April, with preliminary figures for the month showing net receipts of £8.6m., excluding undistributed interest, against a net outflow of £7.8m. in April last year.

Mr. John Anstey, who earlier this month succeeded Sir Robert Bellinger as president and chairman of the National Savings Committee, says in his first commentary on the series of monthly figures that the voluntary workers in the National Savings Movement have "been encouraged by the recent assurances of continued support given by Treasury Ministers, and are fully confident of their ability to undertake the financial and social roles prescribed for them."

Almost 5m. men, women and children, he says, are currently saving regularly in the movement's 100,000 groups.

The competitive position of National Savings has recently improved, as Mr. Anstey points out, with the general easing of interest rates in the money market, and this is reflected in a stronger performance by British Savings Bonds, and by the investment accounts of the savings banks.

	April 1975		April 1974	
—	R'cpts	Re-payments	R'cpts	Re-payments
	£m.	£m.	£m.	£m.
Save as you Earn:				
Dpt. Nat. S.	1.5	1.9	2.4	0.5
T. S. Banks	1.7	1.1	1.8	0.4
Total SAYE	3.2	3.0	4.2	0.9
Savings Certs.	27.1	27.7	7.9	29.0
Br. Sav. B'nds	10.7	14.9*	1.8	15.5*
Nat. Dev. B'ds.	—	—	—	—
Premium B'ds	9.6	6.1	10.6	6.4
Nat. S. Banks:				
Ord. accs.	40.7	42.7	42.9	45.9
Inv. accs.	8.2	8.0	7.2	9.5
Total N.S.B.	48.9	50.7	50.1	55.4
Trustee B'nks:				
Ord. Depts.	228.8	227.3	225.5	185.0
Sp. Inv. Dp.	55.1	47.4	42.3	50.0
Current accs.	58.4	57.1	37.0	44.9
Total T.S.B.	342.3	331.8	302.8	277.0
Total	441.8	433.2†	377.5	385.1†
Net Savings	+ 8.6†		—7.8†	
Accrued Int.	37.5	—	36.4	—
Int. on Certificates & SAYE	—	9.1*	—	10.0*
Total	479.3	442.3†	413.7	395.1†
Ch'nge in sum remaining invested	+37.0†		+18.6†	

* Estimate for 4 weeks.
* Includes £7.2m. British Savings Bonds paid off on maturity.
* Includes £1.2m. British Savings Bonds paid off on maturity.
† Includes securities paid off on maturity.
* Includes SAYE £6.3m.
* Includes nil SAYE.

New plant will offer 250 jobs

ARROW CONSTRUCTION Equipment has acquired the former Gregson plant on the Kitty Brewster trading estate at Blyth, Northumberland.

The factory, expected to be operating by the end of the year, will have 48,000 square feet of manufacturing space and provide 250 jobs.

هكذا من الأصل

Pensions warned on funds for industry

BY MARGARET REID

OPPOSITION to the idea that insurance and pension funds should be compelled to invest in a special fund to finance industry was expressed at the weekend by Mr. Dundas Hamilton, a deputy chairman of the Stock Exchange.

Mr. Hamilton was referring to *a statement from the Association* of Professional, Executive, Clerical and Computer Staff proposing that these institutions should be obliged to put aside *25 per cent. of their new funds* to finance medium-term lending to industry.

He recalled that the suggestion had been for investment of this *cash in Government-guaranteed* loans, at an interest rate 2 per cent. below the Bank of England's Minimum Lending Rate, and an option to convert them *after five-seven years into shares* in the borrowing companies.

What was called a "roving commission" would advise on the areas of investment, while the *Board of the new investment* fund to channel the loans would be drawn from the TUC, CBI, the Government and insurance companies and superannuation *funds*.

Mr. Hamilton, addressing the annual conference of the National Association of Pension Funds, referred approvingly to recent remarks by Mr. Harold Lever, Chancellor of the Duchy of Lancaster, arguing against such compulsory investment schemes.

Mr. Lever, quoting the Prime Minister, had made it clear that such proposals—like those put to a Labour Party committee by Mr. Anthony Wedgwood Benn, the Industry Secretary, were not Government policy and were unlikely ever to be.

On the details of the APEX plan, Mr. Hamilton underlined the effect on the assets of an institutional fund of keeping 25 per cent. of its annual surplus invested at 2 per cent. under MLR, even if some of this was convertible into equities in future. He also feared a struggle between members of the "roving commission" over their criteria for investment, whether employment or productivity, environment or exports.

"Compromise in risk investment—and this is what it would be—is almost always the worst of all possible worlds," he added.

Mr. Hamilton, who was speaking at Aviemore in Scotland, made the point that the recent £500m. of rights issues (raising two-thirds of the capital aimed under the APEX scheme) had proved that it was not the market cash-raising mechanism which was at fault. It was the underlying confidence which required attention.

Chamber of Commerce tackles drift

THE LONDON Chamber of Commerce and Industry is to extend its activities in the economic and industrial sector. These plans follow the setting up of the economic committee by the chamber under the chairmanship of Mr. F. H. Tate, vice-chairman of Tate and Lyle.

The main part of the chamber's plan is to act as a more *articulate voice for manufacturing* industry in London and the South-East. It is very concerned about the drift of industry from the region and is pressing the Government in concert with the GLC and other local authorities to help industry to stay in London and the South-East.

It is particularly worried that existing government controls, despite the recent relaxation on industrial development certificates in the GLC area, are preventing *the modernisation of* existing factories as well as the building of new ones.

The chamber has also recently raised the problem of the general run-down in industrial building throughout the country which it believes could hinder any future expansion in industrial investment.

Following discussions with government departments and other bodies the London chamber is to run regular surveys on industry in the South-East both to monitor how firms in the region are faring on a regular basis and to investigate specific problems.

The *current survey* is looking at company financing and the effects of increased rates. The chamber believes that the effects of the recent rate rises coupled *with the possibility of further* rises next year could result in additional pressure on firms.

John Barnes store to stay

THE JOHN LEWIS Partnership has reversed its decision to close its North London department store, John Barnes. Plans for the closure, which were announced last year and led to angry protests from local shoppers, have now been reviewed in the light of the collapse of the property market.

Originally John Lewis planned to close the Finchley Road store when the Partnership opened its new branch in the nearby Brent Cross development. The idea was to sell the John Barnes property to another store operator. But the fall in property values now means that it has proved impossible to sell the store on what John Lewis describes as "satisfactory terms."

Instead, John Lewis has presented plans to the local authority which would allow it to continue trading in the Finchley Road

GROCERY PRICES INDEX . . .

Bread and new potatoes add 5.02 in one month

BY ELINOR GOODMAN

THE FINANCIAL TIMES Grocery Prices Index rose by 5.02 points in May to reach 183.41. This is the fifth consecutive month in which the Index has gone up by over 2 per cent. and means that it now stands 26 per cent. above its May 1974 level.

The rise, the biggest since last November, is partly due to seasonal factors but also to the extra ½p on bread cleared by the Government at the beginning of the month together with widespread price increases in the frozen food section.

The introduction of new potatoes to the shops, selling at around three times as much as the old ones, always tends to distort the Index at this time of year. In an attempt to iron out this somewhat artificial hump in the Index we have based this month's calculations on the average price for both new and old potatoes.

Even so, this still means that new potatoes have been a major contributor to the 10 per cent. rise in the vegetable bill since last month. Carrots, onions and cauliflowers are out of season at the moment so they were also pushing the Index up this month, while prices of traditional summer vegetables like lettuces are still high.

The meat category also showed a big rise this month, largely as a result of dearer pork prices. Bacon was up between 2p and 6p a pound on last month, reflecting higher auction prices.

The other big rise this month was seen in the flour-based category. The extra ½p on bread was the main reason for this increase but there were also further increases on biscuits and some breakfast cereals, while in the frozen food section most of the products bought by the FT shoppers were showing some price increases.

Despite this month's dramatic rise in the Index, some consolation can be taken from the fact that prices in four categories—dairy, sugar, canned and non-foods — remained remarkably stable with the bill for both non-food and canned goods actually showing small falls.

There were some price increases in all these sectors but they were balanced by promotional price cuts and, in some cases, lower farm prices. In the dairy category, for example, eggs were selling around 3p a dozen less than last month, but these reductions were offset by higher cheese prices.

Historically, the Index shows a fall in the summer once the impact of new potatoes has been *offset and the cheaper* summer vegetables have arrived in the shops. However, it may well be another month before the effects of cheaper vegetables are evident in the Index.

FINANCIAL TIMES SHOPPING BASKET

	May £ p	April £ p
DAIRY PRODUCE	89.55	89.52
SUGAR, TEA, COFFEE & SOFT DRINKS	48.65	48.63
BREAD, FLOUR, CEREALS, ETC.	63.59	60.94
PRESERVES & DRY GROCERIES	20.67	20.23
SAUCES & PICKLES	9.92	9.84
CANNED FOODS	35.49	35.61
FROZEN FOODS	28.25	27.00
MEAT, BACON, ETC. (FRESH)	130.55	127.02
FRUIT & VEGETABLES	73.85	66.64
NON-FOODS	41.55	41.79
TOTAL	542.07	527.24

INDEX

1971: Feb. 100; Mar. 101.09; April 102.73; May 105.75; June 108.00; July 107.24; Aug. 105.40; Sept. 105.26; Oct. 104.35; Nov. 105.48; Dec. 108.26.

1972: Jan. 109.18; Feb. 109.10; Mar. 109.24; April 108.04; May 109.36; June 115.97; July 111.97; Aug. 113.40; Sept. 112.14; Oct. 113.15; Nov. 11: 114.48; Nov. 18: 114.49; Nov. 25: 114.72; Dec. 2: 114.72; Dec. 9: 114.75; Dec. 16: 115.77.

1973: Jan. 117.56; Feb. 119.25; Mar. 120.53; April 123.80; May 125.57; June 128.81; July 127.64; Aug. 126.59; Sept. 129.39; Oct. 138.83; Nov. 135.83; Dec. 138.26.

1974: Jan. 141.41; Feb. 141.52; Mar. 142.66; April 8, 143.23; April 29, 142.64; July 145.17; June 147.97; July 146.22; Aug. 145.25; Sept. 147.6; Oct. 150.5; Nov. 156.39; Dec. 159.15.

1975: Jan. 162.84; Feb. 167.77; Mar. 173.50; April 178.39. May 183.41.

The index is based on the prices paid by 11 shoppers around the country. The shopping, which was done in supermarkets and independent grocers, was carried out last Tuesday.

World Value of the Pound

The table below gives the latest available rates of exchange for the pound against various currencies on May 23, 1975. In some cases rates are nominal. *Market rates are the* average of buying and selling rates except where they are shown to be otherwise. In some cases market rates have been calculated *from the market rates of foreign currencies* to which they are tied.

Exchange in the U.K. and most of the countries listed is officially controlled and the rates shown should not be taken as being applicable to any *particular transaction without* reference to an authorised dealer.

Abbreviations: (S) member of the sterling area other than Scheduled Territory; (k) Scheduled Territory; (O) official rate; (F) free rate; (T) tourist rate; (n/c) non-commercial *rate; (n.a.) not available; (A) approximate rate* no direct quotation available; (sg) selling rate; (bg) buying rate; (nom) nominal; (ex/c) exchange certificate rate; (P) based on U.S. dollar parities and going sterling-dollar rate; (Bk.) bankers' rate; (Bas.) basic rate; (cm) commercial rate; (cn) convertible rate; (fn) financial rate.

Sharp fluctuations have been seen lately in the foreign exchange market. Rates in the table below are not in all cases closing rates on the dates shown.

Place and Local Unit		Value of £ Sterling
Afars & Issas	Djibouti Franc	395.0(sg)
Afghanistan	Afghani	156 (A)
Albania	Lek	(O)10.10(A) (T)25.25(A)
Algeria	Dinar	(A)8.82
Andorra	French Franc	9.26½
	Spanish peseta	129.55
Angola	Ang. Escudo	56.50
Antigua (S)	E. Caribbean	4.80
Argentina	Ar. Peso	(cm)23.25 (fn)56.02
Australia (S)	Australian $	1.7291
Austria	Schilling	38.50
Azores	Portug. Escudo	56.50
Bahamas (S)	Ba. Dollar	2.33595
Bangladesh (S)	Taka	29.95(sg)
Bahrein (S)	Dinar	0.917½
Balearic Is.	Spa. Peseta	129.55
Barbados (S)	Barbados $	4.66
Belgium	B. Franc	(cn)80.95 (fn)85.56
Belize	B$	4.0
Bermuda (S)	Bda. $	2.3260
Bhutan	Indian Rupee	18.754(sg)
Bolivia	Bolivian Peso	46.52
Botswana (S)	S. A. Rand	1.5816
Brazil	Cruzeiro	18.48
Br. Solmn Is (S)	Australian $	1.7291
Br. Virgin Is (S)	U.S. $	2.3260
Brunei (S)	Brunei $	5.24
Bulgaria	Lev	(O) 2.30 (T) 2.84
Burma	Kyat	(A)14.54½
Burundi	Burundi Franc	180.52
Cambodia	Riel	n.a.
Cameroun Rp	C.F.A. Franc	463¼
Canada	Canadian $	2.3900
Canary Is.	Spanish Peseta	129.55
Cape Verde Is	Cape V. Escudo	56.50
Cayman Is. (S)	Cay. I. $	1.94145
Cent. Af. Rp.	C.F.A. Franc	463¼
Chad	C.F.A. Franc	463¼
Chile	C. Escudo	(Bk) 9.558 (T) 10.463
China	Renminbi Yuan	4.1051
Colombia	C. Peso	(F)68.47
Comoro Is	C.F.A. Franc	463¼
Congo (B'ville)	C.F.A. Franc	463¼
Costa Rica	Colon	20.0056
Cuba	Cuban Peso	1.9254
Cyprus (S)	Cyprus £	0.8220
Czechoslov'ka	Koruna	(com)12.70 (n/c)12.40 (T)22.20
Dahomey	C.F.A. Franc	463¼
Denmark	Danish Krone	12.58
Dominica (S)	E. Caribbean $	4.80
Domin. Rep.	Dominican Peso	2.3260
Ecuador	Sucre	(O)57.88 (F)58.15
Egypt	Egyptian £	(O)0.9350125 (T)1.45178
Ethiopia	Ethiopian $	(P)4.8265
Eq'l Guinea	Peseta	129.55
Falkland Is. (S)	Falkland Is. £	1.0
Faroe Is.	Danish Krone	12.54¼
Fiji Is. (S)	Fiji $	1.8598
Finland	Markka	8.22½
France	French Franc	9.26½
Fr. Cty in Afr.	C.F.A. Franc	463¼
Fr. Guiana	Local Franc	9.26½
Fr. Pac. Is.	C.F.P. Franc	168.45
Gabon	C.F.A. Franc	463¼
Gambia (S)	Dalasi	4
Germany (East)	Ostmark	5(A)

Place and Local Units		Value of £ Sterling
Germany (West)	Deutschemark	5.41¾
Ghana (S)	Cedi	2.67
Gibraltar (K)	Gibraltar £	1.00
Gilbert & Ellice Is. (S)	Aust. Dollar	1.7291
Greece	Drachma	68.445
Greenland	Danish Kroner	12.58
Grenada (S)	E. Caribbean $	4.80
Guadaloupe	Local Franc	9.26½
Guam	U.S. $	2.3260
Guatemala	Quetzal	2.3260
Guinea Rep.	Sily	n.a.
Guinea Bissau	♥♥	♥♥
Guyana (S)	Guyanese $	5.21
Haiti	Gourde	11.65
Honduras Rep	Lempira	4.65
Hong Kong (S)	H.K. $	11.46
Hungary	Forint	(com) 112.77 (nc)(T)49.07
Iceland (S)	I. Krona	348.80
India (S)	Ind. Rupee	18.754(sg)
Indonesia	Rupiah	966.29
Iran	Rial	(A)162.4
Iraq	Iraq Dinar	0.685
Irish Rep K.	Irish £	1.00
Israel	Israel £	15.9542
Italy	Lira	1,451
Ivory Coast	C.F.A. Franc	463¼
Jamaica S.	Jamaica Dollar	2.1156
Japan	Yen	677
Jordan S	Jdn. Dinar	0.788(sg)
Kenya (S)	Ken. Shilling	16.6551½
Korea (Nth)	Won	n.a.(g)
Korea (Sth)	Won	1,612.95
Kuwait (S.)	Kuwait Dinar	0.667
Laos	Kip	n.a.
Lebanon	Lebanese £	5.096
Lesotho	S. African Rand	1.5816
Liberia	Liberian $	2.3260
Libya	Libyan Dinar	(P)0.8195
Liecht'nstn.	Swiss Franc	5.77½
Luxembourg	Lux Franc	85.85
Macao	Pataca	12.7525
Madeira	Portug'se escudo	56.50
Malagasy Rp.	MG Franc	463¼
Malawi (S)	Kwacha	1.9655
Malaysia (S)	Malaysian $	5.24
Maldive Is.(S)	Mal Rupee	n.a.
Mali Rp.	Mali Franc	926.5
Malta (S)	Maltese £	0.8574
Martinique	Local Franc	9.26½
Mauritania	Ouguiya	♣
Mauritius (S)	M Rupee	15.55
Mexico	Mexican Peso	29.06
Miquelon	C.F.A. Franc	463¼
Monaco	French Franc	9.26½
Mongolia	Tugrik	(O) n.a. (g) (T) n.a.
Monserrat	E Caribbean	4.80
Morocco	Dirham	9.61(sg)
Mozambique	Moz. Escudo	56.50
Nauru Is.	Aust. Dollar	1.7291
Nepal	Nepalese Rupee	24.40
Netherland	Guilder	5.58
Neth. Antilles	Antillian Guild	4.1885
New Hebrides	Franc	148.74
	Austl. Dollar	1.7291
N. Zealand (S)	N.Z. Dollar	1.7546
Nicaragua	Cordoba	16.34
Niger Rp	C.F.A. Franc	463¼
Nigeria (S)	Naira	1.4556
Norway	Nrwg Krone	11.44½
Oman Sultanate of (S)	Rial Omani	0.803
Pakistan (S)	Pkst. Rupee	22.80(sg)
Panama	Balboa	2.3260
Panama Canal Zone	U.S. $	2.3260
Papua N.G. (S)	Aust. Dollar	1.7291

Place and Local Unit		Value of £ Sterling
Paraguay	Guarani	290.34
P'ple's D. Rp. of Yemen (S)	S. Yemen Dinar	(A)0.78
Peru	Sol	ex/c A90.02 (A)101.04*
Philippines	Ph. Peso	16.3725
Pitcairn Is. (S)	£ Sterling	—
	New Zealand $	1.7546
Poland	Zloty	(Bas.)4.7 (T)76.50
Portugal	Pgse Escudo	56.50
Port Timor	Timor Escudo	56.50
Principe Isle	♥♥	♥♥
Puerto Rico	U.S. $	2.3260
Qatar (S)	Qatar Ryal	9.07
Reunion Ile de la	C.F.A. Franc	463¼
Rhodesia	Pound ● ●	n.a.
Romania	Leo	(cm)11.44 (n/c)(S)23.08
Rwanda	Rwanda Franc	214.88*
St. Christopher (S)	E. Caribbean $	4.80
St. Helena (S)	£ Sterling	—
St. Lucia (S)	E. Caribbean $	4.80
St. Pierre	C.F.A. Franc	463¼
St. Vincent (S)	E. Caribbean $	4.80
Salvador El	Colon	5.82
Samoa (Am)	U.S. $	2.3260
San Marino	Italian Lira	1,451
Sao Tome	♥♥	♥♥
Saudi Arabia	Ryal	8.05
Senegal	C.F.A. Franc	463¼
Seychelles	S. Rupee	15.55
Sierra Leone (S)	Leone	2.0
Singapore (S)	Singapore $	5.24
Somali Rep.	Som Shilling	(A)14.78(sg)
Sth. Africa (S)	Rand	1.5816
S. W. Africa Territories (S)	S. A. Rand	1.5816
Spain	Peseta	129.55
Span. Ports in North Africa	Peseta	129.55
Sri Lanka (S)	S. L. Rupee	15.5585(sg)◆◆
Sudan Rp.	Sudan £	(A)0.87(sg)
Surinam	S. Guilder	4.1585
Swaziland (S)	Lilangeni	1.5816
Sweden	S. Krona	9.10
Switzerland	Swiss Franc	5.77½
Syria	Syria £	(A)8.57(sg)
Taiwan	New Taiwan $	(P)88.398
Tanzania (S)	Tan. Shilling	16.55
Thailand	Baht	47.265
Togo Rp.	C.F.A. Franc	463¼
Tonga Is. (S)	Pa'anga	1.5795
Trinidad (S)	Trin. & Tobago	4.80
Tunisia	Tunisian Dinar	0.960(sg)
Turkey	Turkish Lira	33.0050
Turks & C's	U.S. $	2.3260
Uganda (S)	Ug. Shilling	16.6585
Utd. States	U.S. Dollar	2.3260
Uruguay	Uruguay Peso	(cm)5.385 (fn)5.851
Un'd A'b Emts	U.A.E. Dirham	9.17½
U.S.S.R.	Rouble	1.62
Upper Volta	C.F.A. Franc	463¼
Vatican	Italian Lira	1,451
Venezuela	Bolivar	9.98(x)
Vietnam (Nth)	Dong	(O)n.a.(g) (T)n.a.(g)
Vietnam (Sth)	Piastre	n.a.
Virgin Is. U.S.	U.S. Dollar	2.3260
Western Samoa (S)	Samoan Tala	1.5889
Yemen	Ryal	10.20(sg)
Yugoslavia	New Y Dinar	38.5511
Zaire Rp.	Zaire	1.1640
Zambia (S)	Kwacha	1.4862

♥ That part of the French community in Africa formerly part of French West Africa or French Equatorial Africa.
◆◆ Rupees per pound. Tourists visiting Sri Lanka receive a premium of 65 per cent.
● A decimal currency for the dollar, equal to 10 Rhodesian shillings was introduced by the Independent regime on February 17, 1970. Recent reports suggest a rate of about 1.24 Rh dollars to £1.
♣ The Ouguiya has replaced the CFA franc. The exchange was made at a rate of CFA Frs.5 to one unit of the new currency.
(x) General rate; oil and iron exports 9.77.
(g) The Mongolian tugrik has lately been reported to stand at an official commercial rate of 0.225 Russian roubles, the North Vietnam dong at 0.298 roubles, and the North Korean won at 0.7493 roubles. With the pound standing at 1.62 roubles, the following relationships could be calculated for the pound: £1=7.20 tugriks; £1=5.29 dongs; £1=2.26 won.
♥♥ Information not available for this edition.
* Rate is the Transfer market (controlled).

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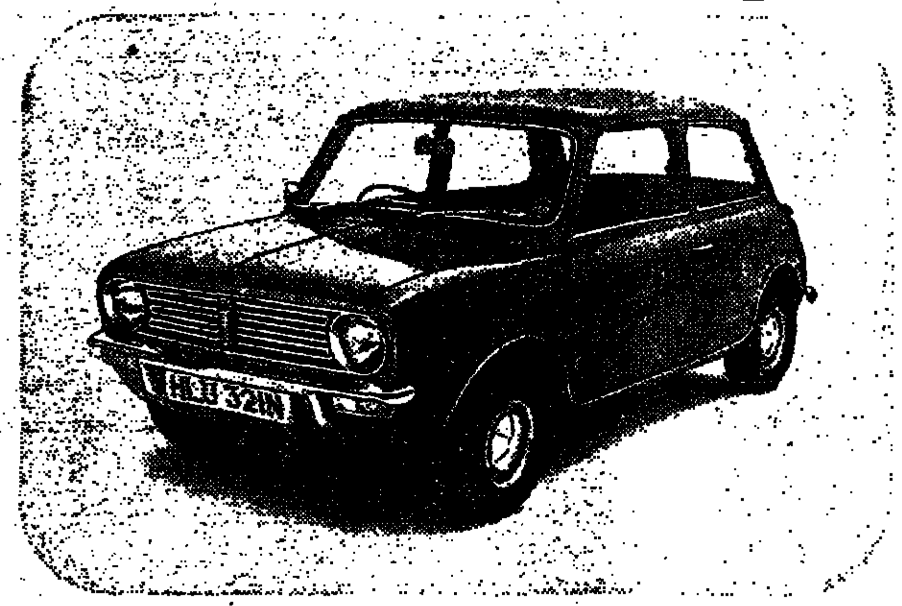
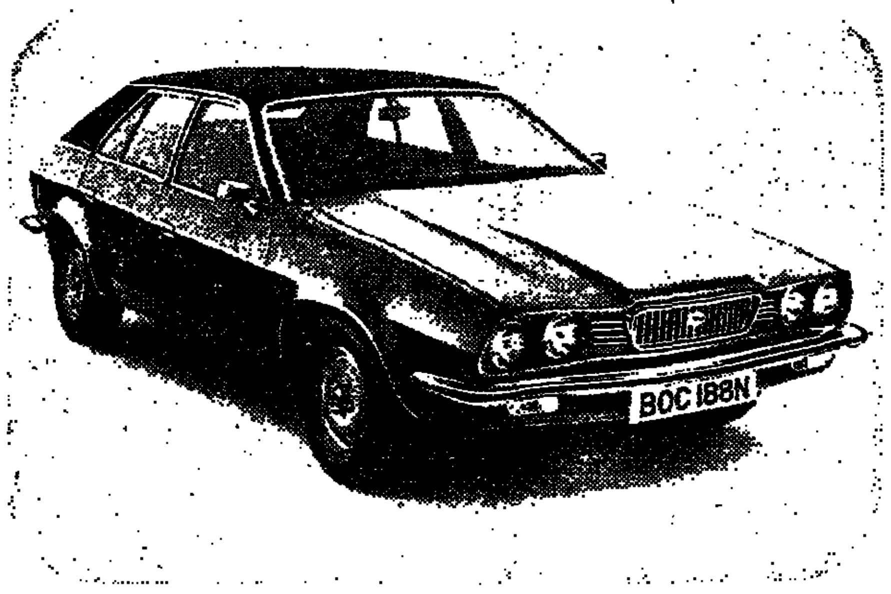

Mini* Clubman



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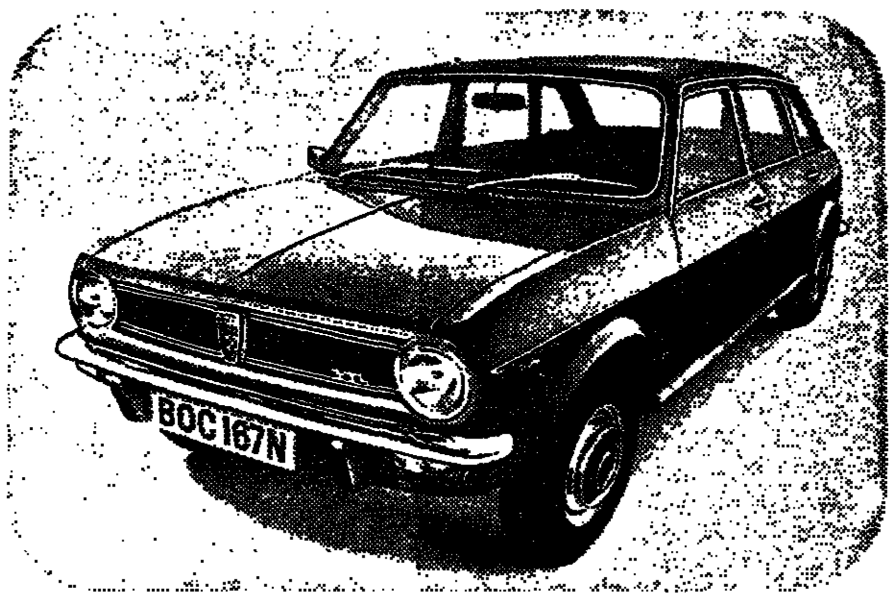
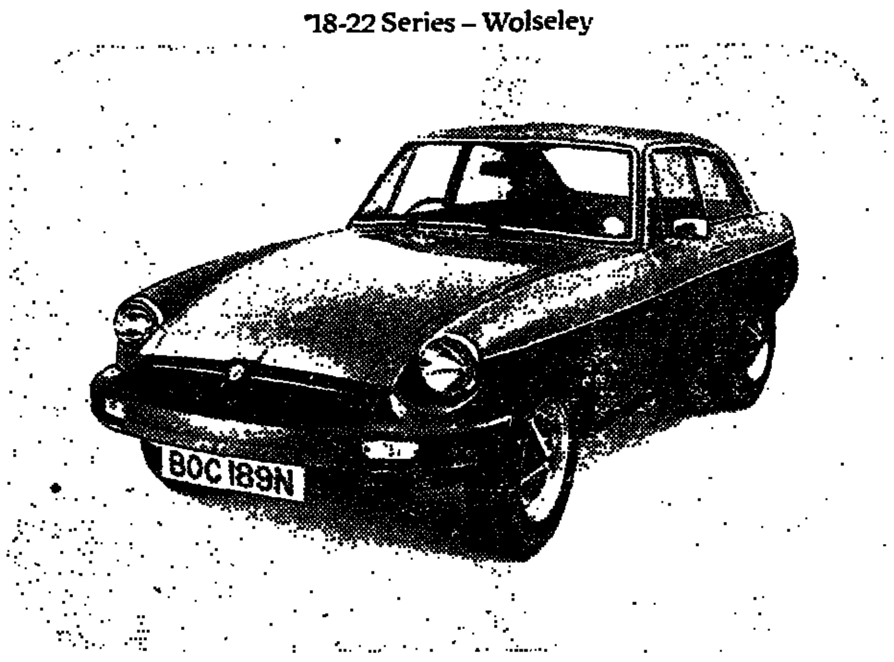
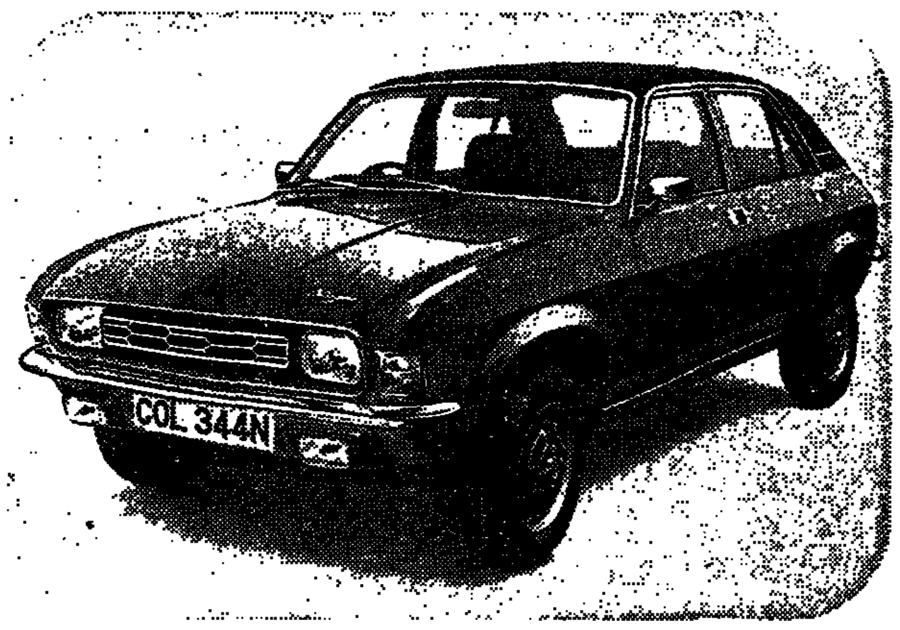


Maxi HL

Marina 1·8 TC Saloon



MGB GT



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BANKING APPOINTMENTS

GENERAL APPOINTMENTS

APPOINTMENTS WANTED

GENERAL APPOINTMENTS

Sandy McLachlan reports on the two-pronged scrutiny of cable makers' agreements

Cartels: what Britain approves Europe may reject

LEADING U.K. manufacturers of heavy electric cables have been in the news twice in recent weeks on the subject of restrictive practices. First, four major suppliers suddenly announced that they had been operating a number of inter-company agreements which had not been registered with the Office of Fair Trading for inspection by the Restrictive Practices Court. Under restrictive practices legislation these agreements automatically became void and have been replaced with a new —registered—agreement which will be considered by the Court in due course. Meanwhile, the companies concerned face the real possibility of being hauled before the Court by the Office of Fair Trading for operating the (now void) unregistered agreements.

The second situation is much less sinister—although, ironically, it was probably directly responsible for the discovery of the first. This was the publicity given to the fact that a group of U.K. companies was involved in an international export cartel. Here the cable manufacturers are but one group of many, since there are at least 100 of these cartels in which British companies are involved either exclusively or in concert with their counterparts from other countries. The Restrictive Practices Act takes the view that these agreements are unlikely to be harmful to U.K. interests and leaves the rest of the world to look after its own in that respect.

Secret register

The only stipulation as far as export cartels are concerned is that they should be registered on a secret register kept by the OFT.

Unlike internal restrictive practices which are dealt with by the Court (or by the OFT itself in very minor cases) export agreements can be looked at only by the Monopolies Commission. What happens is that the Office of Fair Trading makes occasional references to the Commission asking it to look at the supply of a particular product in, *and export from*, the U.K. The inclusion of a specific reference to exports usually follows a look at the register of export agreements.

In the case of cables, the reference was made last July. It seems likely, however, that the Commission would have unearthed the U.K. agreements as well, thus forcing the companies concerned to take evasive action. The new agreement they have registered has been carefully modelled on a "boilermakers'" agreement which the Restrictive Practices Court found did operate in the public interest and therefore allowed to continue.

Control of restrictive practices in the U.K. is largely governed by the Restrictive Practices Act, 1956, and a further Act of 1968 whose main purpose was to close loopholes which had appeared in the working of the original. In principle, the Acts are fairly simple although in practice there have been considerable problems of interpretation. These days further complications exist because European law on the restriction of competition now overrides EEC members' national law on the subject, and there are still areas where it is unclear how this will work.

The word "cartel" does not exist in English law, but any restrictive practice which affects the home market is held to be against the public interest unless the RPC can be satisfied that it operates to its benefit.

Before going into the detailed problems this has caused, it is worth looking at the effects of current practice. Since 1956 3,000 agreements have been registered, and the Court has examined 400. Of them, only 40 were pursued in the Court by the parties to the agreement, and, so far, only ten have been allowed through the net. There are still something like 150 to be considered, but all the rest have either expired or been abandoned voluntarily because the slim or non-existent chance of getting approval from the Court was judged not to be worth the cost of fighting.

The 1956 Act specifically lays down the arguments which can be put forward to justify agreements or arrangements. There are seven of these—normally called gateways—which fall into four categories. The first two relate directly to the public interest and cover protection from injury or the conferment of other advantages on the public at large. Seven out of the ten agreements so far passed by the Court have qualified under the conferment of other advantages tag, with the Court ruling that the agreements concerned helped to keep down prices.

Protection

The second category relates to protection of business interests and allows companies to justify agreements aimed at protecting their business interests either through countervailing action against anti-competitive actions by third parties or to balance the power of an existing dominant market force. The third group relates to more macro-economic considerations. Here restrictive practices can be justified if they help to prevent or reduce local unemployment, or to increase export earnings. The last category is a sweeper which permits practices ancillary to those justified under the other gateways.

The gateways are quite clear, and the fact of only ten successes in 19 years testifies to their narrowness. But legal problems have centred far more on the definition of agreement and, even worse, arrangement for the purposes of the Acts.

So complicated is this issue that a recent book on consumer protection and competition law (*The Fair Trading Act 1973* by James P. Cunningham) devotes almost 20 pages to problems and interpretations handed down by the courts. But the end result has been to cast a pretty wide net. Any agreement of two or more parties where restrictions are accepted is classified as registerable, even if it is not committed to writing and not subject to legal enforcement, but arises through what Cunningham calls "the express or overt meeting of minds, and acceptance of restrictions."

The more nebulous word "arrangement" poses even more headaches of definition. However, it can be most simply described for the purposes of the Act as two or more parties regarding themselves as being to some degree under a duty. When the Court does consider either an agreement or an arrangement and finds that none of the gateway clauses apply, it makes an order prohibiting that agreement and any other future agreements which would have a similar effect. But where companies ignore the Act by not registering, the potential penalties can be even more severe.

In the first place any customer who feels he may have been damaged by the existence of the unknown agreement can sue the parties to it: for example, this would be an option open to the Post Office in respect of the three cable pacts which affected its purchases of telephone cables from the U.K. suppliers involved. Secondly the Office of Fair Trading can apply to the Court for an order with much wider application covering all agreements rather than just specific and "like effect" agreements.

The situation on export agreements is quite different. Here there is no presumption that the agreement is prima facie against the public interest, and until now references to the Monopolies Commission which include export business have been relatively rare. There is likely to be some change in this respect, partly because the Office of Fair Trading has a bigger staff to cope with administering this part of the Act than did the Department of Trade and Industry which handled the job previously, and partly because there has been a certain reaction against the old nationalistic view that there was no objection to export cartels if they helped the U.K. balance of payments at the expense of others.

No penalty

The relatively small number of export cartels registered may owe something to the fact that there is no penalty for not registering. But it is also due in part to the fact that many export cartels have had to be wound up because they conflicted with EEC law. Article 85 of the Treaty of Rome bans all cartels or agreements which act in restraint of trade between member states whether in the form of prevention, restriction or distortion of competition. It makes no specific concession to the public interest but does have one or two equivalents of the U.K. gateways. It may exempt agreements on the grounds that they improve production of distribution or that they promote technical or economic progress, providing that consumers get a fair share of the benefits and that the undertakings involved do not eliminate competition in substantial areas of the products concerned.

Differences

There are many differences between present U.K. law and the European law on cartels to which British companies are also subject (although the EEC Commission is interested only in practices which affect trade between states and not within a single state). For example, U.K. restrictive practices jurisdiction is limited to companies or their subsidiaries operating within the U.K., while the Commission takes the right to penalise external companies for practices which affect competition within the Community.

In spite of the differences, there is not likely to be any real conflict of interest — partly because there is close liaison between the Office of Fair Trading and its opposite number in Brussels—but there are still some areas of doubt to be resolved. If the Commission has declared against a particular cartel then its operation in the U.K. becomes illegal automatically. But if it gives it its blessing there is still the possibility that the Restrictive Practices Court could find one or more parts of the cartel's operation to be not in the interests of the British public. Neither is there anything to bind the Monopolies Commission to find a particular export exercise beneficial even if it has been exempted or given negative clearance by the other Commission.

Conflicts may be avoided, but this does mean that companies have to keep a lookout in two directions when entering into any type of registerable agreement. Thus, while the cable-makers are having their U.K. agreements looked at by the Restrictive Practices Court, their export cartel involvement—which is allowable under U.K. law—may be getting close scrutiny in Brussels.

Benn adamant as Healey hits jobs 'myth'

BY ELINOR GOODMAN

MR. DENIS Healey, Chancellor of the Exchequer, described as "falsehoods" the arguments of Mr. Anthony Wedgwood Benn about the implications for employment of EEC membership. In the strongest rebuttal by a Cabinet Minister of Mr. Benn's arguments, Mr. Healey said at the week-end that Britain would find it more difficult to solve its problems if foreign scapegoats were sought and if "we try to escape from real life by retreating into a cocoon of myth and fantasy."

Mr. Benn, in his turn, stuck defiantly to his guns. Britain's trading losses with the Market were already damaging the nation's major industries, he said, and the effects of Common Market membership on employment would eventually spread to teachers, local government officials and public servants.

But in Mr. Healey's view, the claim that Britain had lost 500,000 jobs as a result of a deterioration of our manufacturing trade with Western Europe was, "surprising" and unworthy of a detailed statistical reply—"easy as this would be."

In a statement on Sunday, the Chancellor said there was no necessary correlation between trade and employment. "If there were, Germany would not now be suffering from high unemployment when she has the biggest balance of payments surplus in the Western World." It was difficult, he maintained, to see how those who made these claims could say in the same breath that they would like to negotiate a free trade area with the Common Market after leaving it; "in that case our tariffs with the Common Market would continue to be reduced in the same way as they are now.

"That is sensible enough, since, for example, the whole of the Government's strategy for supporting British Leyland depends on increasing Britain's share of the European car market by a third—something which would be much more difficult if tariff barriers were raised."

Livelihood

Such arguments, Mr. Healey added, made nonsense of the claim that the removal of European trade barriers were the cause of our trade deficit and unemployment. What was particularly damaging about falsehoods was "that in throwing the blame for all our difficulties on to the Common Market they divert attention from our real problems."

Mr. Benn, however, retaliated by repeating his argument about the impact of membership on jobs.

Reading from a prepared statement, Mr. Benn pointed out that Britain provided jobs, bought its food and paid its national bills with the cash earned selling its goods abroad.

"In the world markets this year, Britain is earning nearly £4bn. net in our trade in manufactures," he said. But in the Common Market, the nation was losing £1bn. net.

"Britain's livelihood depends on us selling our manufactures," he said. "If we remain in the Common Market where we buy so much more than we sell we would not be able to pay our bills and we will gradually put Britain on the does."

The facts, he declared, were quite clear—Britain's trading losses with the Market were already damaging the nation's major industries.

He added: "Unemployment will not only threaten men and women in the steel, textile, engineering and motor-car industries. As our national income suffers, the blight will spread through shops and offices and even into the public services. A weakened Britain within the Common Market would soon be driven to throw teachers, office workers, secretaries, local government officials and other public servants out of work. "As a nation we cannot afford to stay in the Common Market. We must withdraw and develop our trade where we are already strong and successful—with the world as a whole."

Vote decisive for defence says German Minister

BY JONATHAN CARR

BONN, May 26

IN A SURPRISING intervention in the debate on British membership of the EEC, West German Defence Minister Georg Leber to-day stressed the importance of a positive vote on June 5 for European defence and the Atlantic alliance.

Speaking to the assembly of the Western European Union (WEU) meeting here, Herr Leber repeated Bonn's belief that U.S. support for Europe had not wavered—but that in return the European allies had to show themselves to be true alliance partners.

Britain's vote on Community membership, Herr Leber said, would have decisive influence on the weight of that European partnership, for a positive outcome would enable Europe to speak with one voice. He compared the referendum in importance with London's original decision to maintain forces on the Continent for a common defence.

'Fear and smear tactics'

PRO-MARKETEERS were last night accused of resorting to the "tactics of fear and smear" in the EEC Referendum campaign.

The accusation came from Mr. Christopher Frere-Smith, the chairman of the Get Britain Out Campaign, in a speech at Reydon.

Mr. Frere-Smith said: "Lord Hailsham's latest pronouncement that anyone who wants a 'No' vote is a pawn of those who want to bring about the destruction of our society, does not come well from one of the Men of Munich who supported appeasement of Hitler before the war.

"I have found growing evidence of people up and down the country who, two weeks ago, intended to vote 'Yes,' but are now having second thoughts because of the hysterical prediction of doom and disaster by Lord Hailsham and his friends."

Scottish Yes vote 'threat to Assembly'

By Chris Baur, Scottish Correspondent

THE anti-Common Market campaigners opened their major offensive in Scotland yesterday with a warning from a Scottish Office Minister that if Scotland voted in favour of continued British membership in the referendum it would put new obstacles in the way of devolving significant powers from Westminster to the proposed elected Scottish Assembly.

The warning was issued by Mr Harry Ewing, the Scottish Minister responsible for devolution who is himself fighting a stiff battle within the Government to have industrial and economic powers transferred to the Scottish Assembly.

A new White Paper on devolution is expected to be published this summer as a prelude to a Bill before the end of the year. The question of what "teeth" the Scottish Assembly should have has still to be determined by the Cabinet.

Mr. Ewing's view that a pro Market vote in Scotland could impede the transfer of important powers may carry considerable weight in Scotland where the character of the proposed assembly is still a more alive political issue than that of EEC membership itself.

Signal

This is the first time that a relationship has been drawn between the two issues. Mr Ewing said: "A 'Yes' vote in Scotland would make the devolution of power from Westminster much more difficult."

The key powers whose transfer to an assembly was now being debated by Government were trade and industry, employment and taxation. These were all matters which were directly controlled by the EEC Commission and in these fields, said Mr Ewing, "we would no longer be masters in our own house."

He did not agree, he said, that a Scottish "Yes" vote would also be a signal to the Government of diminishing Scottish support for the Scottish National Party which is also campaigning against the Market. The Government was very much aware that Scotland's plea for more say in its own affairs was increasing in strength. To interpret a favourable Scottish EEC vote otherwise would be "a grave misjudgment."

U.K. entry will promote peace, says Peart

MR. FRED PEART, the Agriculture Minister, said that it was not only in Britain's best economic interests to stay in the Common Market, but also in the interests of world peace. "No one can deny that a strong Europe, with Britain as a part, has a vitally important role to play in the world to-day," he said.

Mr. Peart was speaking on arrival in Luxembourg for the Council of Agricultural Ministers — the last before Britain votes in the referendum. Colleagues in the Council and Commission had found it possible together to bring about a more flexible approach to the Common Agricultural Policy, he said.

CIA claim 'sheer desperation'

Financial Times Reporter

THE BRITAIN in Europe organisation yesterday dismissed allegations that the CIA had helped to finance pro-European organisations at the time of the Common Market's inception as "picking up very ancient political fag ends."

Mr. David Steel, vice-president of Britain in Europe, said that it was a sign of "sheer desperation" in the anti-Market campaign that it should "latch on to 20-year-old allegations about CIA finances of European youth campaigns" and attempt to relate these to the referendum.

The Britain in Europe organisation, he said, would be publishing its finances in full and it would be shown that "not a penny" of its income had been derived from CIA sources.

Earlier during the week-end, Mr. Richard Body, the anti-Market Conservative MP for Holland-with-Boston, wrote to the Prime Minister asking him to investigate the allegations about CIA finance for pro-Market organisations, first published in Time Out magazine last week.

Anti-Market case built on fear—Thomson

THE ANTI-MARKET Campaign is based on a neurotic lack of national self-confidence," Mr. George Thomson, a European Commissioner, said last night.

"Their case is always built on fear that whatever the rest of the Community does is bound to ruin us. They have no faith in Britain's capacity to compete on equal terms with her trading partners," he said.

Other Community members wanted Britain to stay in—as proved by the way they made a success of the re-negotiations. "It is an insult to suggest that they want Britain for our North Sea oil, which in any case remains a national asset," said Mr. Thomson.

Protest to Belgian envoy

MR. CLIVE JENKINS, general secretary of the Association of Secretarial, Technical and Managerial Staffs, sent a letter to the Belgian ambassador protesting at an "intervention" in the EEC referendum.

Mr. Jenkins claimed that on a visit to Belgium he was "astonished" to see material advocating Britain's continued membership of the EEC displayed in official Belgian State offices.

At the Zeebrugge car ferry terminal, he claimed, pro-EEC car stickers were handed out.

REFERENDUM REPORT—NORTHERN IRELAND

No treaty with Rome

The writing on the wall in Belfast.

SECTARIAN politics are so entrenched in this outpost of the EEC that the Rome Treaty has its own peculiar connotation which has more to do with the Vatican than with Brussels. It is, of course, true that every election here is something of a border poll, a vote for the union with Britain or for unity with the predominantly Roman Catholic Irish Republic to the south, and the June 5 referendum will be no exception. To Ulster loyalists, Dublin rule is akin to Rome rule, and anyone campaigning to stay in the EEC is inevitably suspect in the view of most Northern Ireland Protestants.

The entire electorate of just over 1m. voters, very roughly two-thirds of whom are Protestants, is, in any event, apathetically sick of the whole election and referendum process. For many Ulster people June 5 will be their seventh visit to the polling stations since the controversial Border poll in March, 1973; just how many will actually take the trouble to express a view on the EEC in ten days' time depends on the extent of the electoral apathy, and all current indications point to a low turnout—and to a "No" vote, although the margin against continued membership may well be smaller than most of the antis are now suggesting.

It is even possible that the pro-Marketeers could win the day, but the odds are strongly against it, primarily because most Ulster loyalists see in the referendum another way of telling Dublin that they want nothing to do with the South. The EEC referendum is, of course, nothing to do with the Irish Republic, but the very fact that the Government in Dublin has decided to remain a member of the Community, irrespective of the final British verdict, is enough for the majority of Northern Ireland Protestants to vote the other way!

After all, they will tell you, is not Europe "totally dominated by Catholic Parties?" (The myth tends to get grossly exaggerated in the sectarian ... that is Ulster to-day) and Dublin is thought to have it own ... in the European theatre ready to take up the cause of a united Ireland. It matters little that these same legions are as mythical as those once—sarcastically—attributed to the Pope; it is what people believe that counts, and the anti-Marketeers have been busy these past few weeks convincing Ulster loyalists that the EEC referendum provides yet another appropriate opportunity to sound the traditional Unionist political cry of "no surrender."

The referendum campaign itself, such as it has been so far ... where most people and ... all the politicians ... other things on their mind, is not without its peculiarities. The broad body of Unionist opinion is generally against continued British membership, despite the traditional ties between Ulster Unionism and the main stream British Conservative Party thinking. On the other hand, the Social Democratic and Labour Party (SDLP) which likes to think of itself as having a close affinity with the British Labour Party, and particularly with the Labour Left, has come out in favour of Europe. The capsule guidance for anyone confused over this seeming reversal of ideological roles must be to look closely at the basic motivation for the respective decisions, and it has precious little to do with economic considerations.

Northern Ireland Loyalists in the United Ulster Unionist Council (UUUC) have already secured an overall majority in this month's elections for the Constitutional Convention which is to try to find an acceptable political formula for the future administration of the Province, and to them sovereignty is the big issue. They want passionately to maintain the union with Britain, and most of their political leaders believe that continued British membership of the Community will mean a gradual erosion of national sovereignty.

Their argument gets somewhat blurred at this point, but basically it is that such an erosion of sovereignty would weaken the Province's constitutional links with Britain and, in some as yet undefined way would bring about a united Ireland apparently under insidious pressure from top bureaucrats in Brussels with the connivance of the Government in Dublin.

The SDLP, meanwhile, sees a "No" vote as reinforcing the existing border with the South in view of Dublin's decision to remain in Europe, since the present political frontier would inevitably take on a major economic dimension. This could only be bad news for a party whose ultimate objective remains the bringing about of a united Ireland, hence the SDLP advice to its supporters to vote "Yes" on June 5. This is despite the fact that the Party's leader, the Westminster MP Mr Gerry Fitt, himself crossed the border to campaign publicly against the EEC at the time of the Irish Republic's Common Market referendum in 1972, the result of which, incidentally, was an overwhelming four to one vote in favour of membership.

The SDLP was also a major component in the short-lived power-sharing Ulster Executive which emerged from the Anglo-Irish conference at Sunningdale at the end of 1973, and the two other participants in that package, the (then) Unionist Party under Mr. Brian Faulkner, the former Prime Minister, and the small non-sectarian Alliance Party led by Mr. Oliver Napier, have both come out this time in favour of Europe. Mr. Faulkner's support, of course, has since then all but gone to the UUUC, and the very fact that the main "Sunningdale personalities" are now in support of continued EEC membership is, for most Ulster Loyalists, a good enough additional reason for them to vote "No."

Having so roundly rejected power-sharing and the so-called "Irish dimension" in the Constitutional Convention elections on May 1, the Loyalist community can see no merit in responding this time to the urgings of the discredited power-sharers and this, in the curious way that is Ulster politics, puts Loyalists on the same side of the EEC fence as the extremists in the Provisional IRA and their front supporters in Provisional Sinn Fein who are campaigning for a vote "No" next week.

Just how successful the IRA's anti-Market campaign will be on June 5 will probably depend on what actually happens on the day itself. Certainly the Provos mounted an effective intimidation campaign against participation by Ulster Catholics in the Constitutional Convention election on May Day, mainly through the physical presence of their activists directly outside polling stations in many regions.

The Provisionals' dream of "an All-Ireland Socialist Republic" can hardly be realised by a pro-Market majority in the Province, and the militants are at least being consistent in that they also opposed the EEC membership in the referendum campaign in the Irish Republic. Protestant paramilitary forces, too, are also against continued British membership, although obviously for quite different reasons, yet Mr. William Craig, the former Home Affairs Minister and now leader of the hardline Protestant Vanguard Movement, is known to be personally in favour of the EEC. His precise motivation is rather difficult to fathom, but it could well be connected with his ultimate objective of securing (whether through negotiations or unilaterally) an independent Northern Ireland, and his belief that a defined economic relationship with the Community would be a real plus in making an independent Ulster viable.

Mr. Craig is also well aware that a "No" vote in Northern Ireland would frighten away a lot of potential foreign investors, while his own constituency of East Belfast contains the big Harland and Wolff shipyard whose workforce is solidly Vanguard and whose survival now depends in large measure on the British taxpayer. That could be a good enough reason for Mr. Craig's pro-Market vote: the EEC's Common Agricultural Policy may well sway the issue personally for Mr. Harry West, another of the UUUC leaders, since he himself is a farmer of some substance and knows the advantages of the CAP. However, he also knows Ulster Loyalist politics, and his personal preference for Europe will probably remain a referendum booth secret.

The absence of opinion polls in the low-key nature of the referendum campaign to date makes forecasting unreliable, and it is noticeable that Belfast's two morning newspapers are falling over themselves to avoid taking a clear editorial line on the issue. The turnout will almost certainly be low — perhaps of the order of the 58 per cent. turn out in the 1973 Border referendum which went massively in favour of maintaining the union with Britain and against Irish unity.

It could be a repeat performance this time against the EEC, but perhaps the Dublin-based *Irish Times* got closer to the final outcome when, enterprisingly, it informally polled 78 members of the Constitutional Convention. The result was 40-30 against continued British membership, and most of the 8 "don't knows" seem likely to come down against. Overall, it looks like an Ulster "No" but it will not be a verdict on the Community as such.

Dominick J. Coyle

The Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

● BANKING

Cash dispenser war in the offing

BARCLAYS HAS ordered 100 NCR 770 self-service financial terminals. Virtually a "mini-bank," the NCR 770 can be used to bring many banking services right on to the street.

The bank ordered six early production models of the 770 when it was released a year ago. These have been undergoing trials. Delivery of the 100 770s will begin shortly.

Barclays is initially using the 770s for cash dispensing. No decision has yet been taken on the range of services they will ultimately provide, but they are clearly intended as more than an answer to the Lloyds Cashpoint.

Customers issued with an appropriate magnetic striped plastic card can, following the simple instructions displayed by the terminal, carry out not only withdrawals in banknotes, but also make deposits, deal with account inquiries, place cheque book or account statement requests, obtain foreign currency exchange rates or make account transfers — all simply and automatically.

The NCR 770 can help banks to improve customer facilities, while holding down staff costs. Mounted through-the-wall of a bank and installed in other sites such as stores, supermarkets, offices, factories or railway stations, it will permit user banks to provide a 24-hour service and broaden the appeal of a bank account.

Thus there is a strong possibility that the Barclay Card, or a derivative thereof, will add to its functions of credit card and cheque guarantee card, that of a money withdrawal card for use out of banking hours. It will be difficult for its major rival quickly to follow suit.

● ELECTRONICS

Linear lamp array

INTENDED FOR applications where the need is to present an electrical output in linear analogue form in a ten bar light emitting diode display from ITT Components.

Each unit has ten red light emitting bars in a length of about 2.5 cm, the package being ten pin dual-in-line. The devices are end-buttable so that no discontinuities are seen when a number of units are used to form an extended column display.

Drive circuits can be either MOS or TTL. The device is robust and suitable for industrial environments. Further information from Electronic Device Division, ITT Components Group Europe, Brixham Road, Paignton, Devon (0803 50762).

● PROCESSES

Tape coater goes on stream

NOW ON stream at 3M's magnetic tape plant at Gorseinon, near Swansea, are two pieces of capital equipment which have been installed as part of a £3m. expansion programme for the company's recording materials division.

One is a 3M-designed, £1½m. tape coating machine and the other is an automatic cassette assembly machine.

The tape coater is housed in a 31,000 square feet building, constructed and equipped to "clean room" standards.

The tape maker handles the very thin web used for long-playing tapes and applies both oxide and back-surface coatings, or dual-layer formulations such as that used in the latest Classic ferri-chrome cassettes. It can also make two different types of tape (for example, a computer tape and an audio tape) at the same time.

Tape widths are now controlled to within 0.002 inch, and the machine controls tape "weave" to ±0.003 inch. Among the Scotch recording tapes made at Gorseinon are 777GP computer tape; broadcast videotape (for both home and overseas); 206 studio mastering tape; a range of low-noise cassettes for home hi-fi enthusiasts and video-cassettes.

● HANDLING

Sling aids pipelaying

FOR USE on pipeline construction schemes, a heavy-duty (20 tons) ram's horn sling, incorporating renewable friction resistant nylon webbing, has been introduced by Sandem Web Slings Co., Compstall Mills, Compstall, near Stockport, Cheshire.

A feature is the metal end plates which ensure that the webbing is held at its full width for even distribution with all the threads taking their share of the load. The sling comprises three thicknesses of webbing stitched across the width so that the bands remain together during lifting.

The company will reweb the slings provided the terminal plates are not damaged.

● CONFERENCES

Discussions on metal finishing

GOLDEN JUBILEE Technical Conference of the Institute of Metal Finishing will be held June 4-6, at the Europa Hotel, London, when some 33 papers are to be presented by world authorities.

The conference deals not only with technical problems but with those affecting the economy of the industry, and with environmental aspects, particularly those of pollution and reclamation. The accent will be largely on quality control, and the desirability of plant investment in the industry will also be stressed.

Details from the Institute 178 Goswell Road, London, EC1V 7DU (01-253 4775).

● BUILDING TECHNOLOGY

Protected from the sea air

BECAUSE of its constant exposure to sea air, Britain's first "Space Tower" on Blackpool's pleasure beach has gone into service with a coating of Liquid Plastics' "Isoclad" anti-corrosive membrane.

Standing free in a 1,015-tonnes concrete foundation, the 158-foot (48.16m.) high tower has a doughnut-shaped observation cabin seating 50 people which rotates up and down the slender steel tower at a speed of 220 feet (67m.) per minute. Tens of thousands of holidaymakers are expected to make the so-called "space ride" at the rate of 15 trips an hour during the 1975 holiday season.

The 6½-foot (1.98m.) tower is constructed of cylindrical steel tube sections rigidly bolted together with flange plates providing a uniform surface for most of its height. It was designed by Intamin AG, of Zurich, Switzerland, to withstand hurricane-force winds in excess of 90 miles (145km.) per hour.

Liquid Plastics, POB7, Preston, Lancs., PR1 4AJ (0772 59731).

Building's services automated

BUILDING automation equipment that gives fast and accurate control and monitoring of the mechanical and electrical services in a building or group of buildings is being installed at a number of sites by Johnson Control Systems, of Leatherhead, Surrey. Johnson JC/80 building automation system is the first such equipment to be built around a specially designed mini-computer working in real time, its designers assert.

Various configurations already on site represent contracts totalling £2m. The company plans to double this figure during the next 12 months. The system will accept plain English and code and an operator sitting at the control panel can receive and transmit information whenever a problem occurs or a change in environmental circumstances is required.

This two-way transmission of information is carried out around a building complex on a communications loop principle. The loop controller is the computer and the various sensing devices throughout the building are connected into strategically placed panels (called loop remote panels) which perform the encoding and decoding required for the loop transmission.

All data transmission on the loop cable is in digital form and use is made of computer verification techniques such as parity bit checking and repeat signalling to ensure accuracy. The loop cable, including internal circuitry, the loop controller and the loop remote panels are supervised and any malfunction is annunciated and specifically identified to the system operator.

Johnson Control Systems, Leatherhead, Surrey. Leatherhead (53) 76111.

Surveying made easy

WIMPEY IS automating land surveying and is already using a suite of programs, written in-house by Wimpey staff at Hammersmith, which includes routines for the plotting of field data, contouring and road design.

Wimpey's decision to "go it alone" and do the job on a small but powerful Nova computer resulted from an extensive study of other possibilities. Surveying packages already available proved to have a number of disadvantages; in particular, they were uneconomical except on large surveys, and required field data to be heavily edited before it could be used. Wimpey also felt that programs which were to be used by engineers and surveyors would be best designed by the engineers, supported by in-house computer specialists.

The initial program of the suite uses the basic field data to produce a plot of the site plan. Misclosures are automatically adjusted, and the program allows for any number of minor traverses.

The contouring program uses data selected by the surveyor, who eliminates irrelevant detail such as ditches, to plot the contours of the site, interpolating curves where necessary. A number of other programs being developed or planned include a road design suite, environmental programs and surface water design suite.

Versatile hammer

CAPABLE OF drilling, chiselling, chasing and coring, as well as light demolition jobs, is the TE60 rotary hammer introduced by Hilti (Great Britain), Faulkner House, Faulkner Street, Manchester, M1 4DT (061-236 2100).

The drill is powered by an 800 W motor, and uses an electro-pneumatic principle to provide 2,800 blows/minute. The machine weighs 17 lbs, and there is almost no recoil—no hand pressure is required for operation.

Tools are changed with a key-less chuck, and chiselling or drilling action is selected by a lever. The machine will drill wood, brickwork and light gauge steel.

Holes can be drilled from 10 to 120 mm. diameter to a maximum depth of 800 mm. (with 22 and 32.5 mm. diameter drills only). Chisel bits available are pointed, narrow flat, hollow, channel and wide flat, together with a bushing tool and combing chisel.

Cladding is easy to fit

HIGH insulation value of 0.90 watt/square metre/degree Centigrade and up to 90 per cent. external heat reflectivity, are given as major properties of a new wall and roof cladding developed by Alcan Booth.

It is made up from aluminium sheet with a 20 mm core of isocynurate foam, hot-spray bonded to it, the opposite side being faced with vapour-proof vinyl-coated aluminium foil. The company says its tests show that as an insulant it is more than twice as effective as typical asbestos sheet with 10 mm plaster board.

Aimed principally at industrial and large housing schemes, the cladding can be fixed in one operation from the outside so eliminating scaffolding inside a building being erected.

Alcan Building Materials, Blackpole Trading Estate, Worcester WR3 8TJ (0905) 54030.

● HEATING

Improved drying method

SUCK-BLOW methods of drying cellulosic webs, or opening up the structure of non-woven fabrics to provide greater bulk and a better handle are claimed by the inventor to provide a considerable advantage over existing patented methods which involve either suction only or blowing only, generally through a perforated drum or belt over which the material is travelling.

The new idea provides for constant inwards suction, drawing hot air through the travelling web of material. But at frequent intervals there are pulsed hot air jets which drive the web in the opposite direction for a fraction of a second. Immediately thereafter, it is pulled back towards the supporting surface.

This means that as the material dries, it also tends to fluff up more than it would under straight suction. Contraction as the moisture evaporates is also much less of a problem.

The method makes it possible to use far higher drying temperatures than hitherto and take as the drying medium combustion gases from oil or gas with or without air admixtures.

It is suggested that the drying method, apart from treating wood pulps and non-woven fabrics, could be used to great advantage on milk powders and coffee powders as well as pigments.

Further information from J. van Tilburg, holder of a number of provisional patents on the method at 6 Clarendon Gardens, London W9 1AY (01-286 7635).

The inventor suggests that air-borne transpiration drying and forming would be the best description of the process.

● COMPUTING

Easy for a user to maintain

A LIBRARY of 200 program options, entirely free, is offered as a matter of policy with the Philips 300 series of electronic accounting systems, the newest member of which (the 320) is now being shown to potential buyers in Britain.

This 320 is similar to the 310, already launched, but it has in addition a magnetic ledger card (MLC) facility. Philips claims European market leadership in MLC machines, well ahead of both Burroughs and NCR.

Visually, the machine has clean and simple lines and is so quiet that it can go into any office.

One of the significant points in its favour, particularly for the small company, is the way in which faults are signalled. The equipment is built up in a modular fashion. To each main section corresponds a function light. Should it not perform a given operation the light pattern will immediately show where the defect is. A telephone call to the service engineers indicating what this pattern is will immediately instruct them what component to bring along. This is a major time-saving for both user and supplier.

The decision to supply, free, the program options may—at first sight—seem prodigal. But it is based on the reasoning that it is better to provide a sound and well-tried routine to do such jobs as payroll, stock-control, etc., rather than attempting to write tailored programs that will take account of all the special vagaries of the individual company.

The only expenditure is in changing company routine to suit a standard procedure—the alternative is changing routine to suit computerisation and paying separately for special programs. Philips Electrologica thinks its solution is better—for both client and supplier.

Programs are available for every day-to-day accounting operation and a few less frequently needed routines.

Philips now has well exceeded a total of 50,000 visible record computers installed, mainly in Europe. Ultimately, that is to say later this year, these installations will form part of the Unidata equipment base. The question many people will ask is what Unidata will now be offering as the next step-up from the 300's, though the latter already have the capability of being used as terminals to larger central machines.

The "defection" of CII has put a large question mark over the smallest machine in the Unidata range, a machine designed, developed and to be built in France. Perhaps the ICL 2903 would meet the case. There would be no problem in running 300's as terminals, or so ICL believes.

Philips Electrologica: Elektra House, 2, Bergholt Road, Colchester, Essex C04 5AAX. 0206 5115.

● COMPONENTS

Valve costs simply cut

SUBSTANTIAL cost reductions in the manufacture of electro hydraulic and solenoid operated valves are being achieved at Magnetic Devices by using other materials and by re-design of certain parts. In general these cost reductions are enabling Magnetic Devices to hold its prices down and very often no lowering of specification result. In some cases, such as when particularly corrosive fluids are used, the use of lower cost materials can be overcome by plating.

In one example, a Magnetic Devices gas valve, the original castings for the actuator cylinder, lid and pump have been changed from gun metal to aluminium. This provided a 50 per cent. reduction in the cost of the unmachined parts. The aluminium version has received Class 1 approval by the British Gas Corporation. A brass pressing cover has been changed to a gravity casting which can be produced in gun metal or aluminium.

Another change which has led to substantial savings was to alter the through terminals from the oil-filled cylinder unit to the terminal box section of the actuator casting. Two metal-sleeved ceramic terminals were previously used and the time and gas required to heat the area to be brazed was considerable. By using P and FE push fit terminals the heating problems were overcome.

Further cost reductions are being studied. The actuator unit could be re-designed using a pressure die casting incorporating the cylinder, pump and relief valve body in one component. This, together with some other changes, will reduce the production cost by 30 per cent. of the aluminium version, which itself produced a cost reduction of approximately 20 per cent. of the gunmetal cost.

In a new series of solenoid valves, the 4000 series, just announced by Magnetic Devices, a zinc pressure die casting is used in place of brass pressings. This has achieved a cost reduction of about 20 per cent. but because zinc is not suitable for some applications the brass version is still being produced.

Magnetic Devices, Exning Road, Newmarket, Suffolk CB8 0AX. Newmarket 3451.

هكذا في الأصل

Building and Civil Engineering

£30m. Panama deal

CEMENTATION International, overseas construction wing of Trafalgar House, has begun work on the first stage of a £30m. project in Panama City. Key men are already on site, preparing for Stage 1—worth about £10m.

It involves development in and around the existing El Panama Hotel building. It provides for the addition of a new 328-room wing with roof-top "presidential suite," 58 cabanas grouped around a swimming pool to form a landscaped court, a casino and cocktail lounge, conference rooms, exhibition hall, and terraced gardens from the main dining area and bar, with a two-level shopping arcade beneath, served from the Via Espana.

The second stage, costing about £20m., is dominated by a 32-storey tower block linked to a second block of 12 storeys by covered walkways and shopping arcades. A restaurant and bar will serve these areas, and parking for an additional 200 cars is included.

A banqueting hall for 1,000 people, adjacent to the new bedroom extension, is included in this stage, as well as banking halls with offices above at the south east and south west corners of the development.

Cementation International has retained the London architects Raglan Squire and Partners with whom it has co-operated on many overseas projects.

All civil, structural, mechanical and electrical engineering design work will be carried out by T. H. Engineering Services.

Wimpey shipyard contract

GEORGE WIMPEY has been awarded a £9m. contract by Cammell Laird Shipbuilders for the completion of the reconstruction of its shipyard at Birkenhead.

The project involves construction of a slipway, a construction hall and associated works. Completion scheduled for mid-1977. The consulting engineers are Babtie Shaw and Morton.

Four factories are to be built by the company on the North West Industrial Estate, Co. Durham for the Peterlee Development Corporation.

Two housing jobs

TWO HOUSING contracts calling for the company's Quikbild Timber Frame system have been awarded to Llewellyn Homes of Eastbourne, Sussex. Total value is £3m.

At Crawley, Sussex, the Borough Council has placed a continuation contract for the second phase of the Broadfield Estate Development. This contract is worth just on £2½m. and involves 240 dwellings. Work will start in July.

Slough Borough Council has also placed its second order with the company for 44 dwellings at The Mere. This is mainly for two-storey flats and its worth £½m. This job will also start in July.

The company says these latest contracts bring the total value of orders placed for Quikbild housing since the beginning of the year to over £30m.

Oil terminal and port projects

THE GENERAL Petroleum and Mineral Organisation (PETROMIN) of Saudi Arabia has engaged Rendel Palmer and Tritton as consultants for the development of its marine oil terminal at Jeddah.

A contract for the construction of the facilities has been signed by Petrola Engineering International of Athens and it is estimated that the cost of the first stage will be about $10m.

Rendel Palmer and Tritton will advise, check designs and supervise the work which involves an oil jetty, approach causeway link with the shore, a navigation channel dredged through a coral reef and pipelines for crude oil carriers up to 100,000 d.w.t.

In Australia, the consulting engineers' affiliate, Rendel and Partners, is to carry out studies and prepare a master plan for the development of Brisbane's new A$100m. port at Fisherman Islands.

The study will be carried out on a 60 per cent. Australian and 40 per cent. London participation basis by the Rendel group, the London participation including assistance from Plancon, consultancy subsidiary of the Port of London Authority, and will cover a wide field of general investigation into the infrastructure and operation of the port.

This will include the economics of all aspects of cargo handling during the move to Fisherman Islands, industries, marketing, and port operations.

The master plan is to cover the development of the port for a long time ahead and the study is expected to take six to eight months to complete.

Power units for ore unloaders

GEC Electrical Projects has received an order valued at over £0.75m. from Clarke Chapman, crane and bridge division, for electrical equipment for two grabbing-type ship ore-unloaders to be installed at the British Steel Corporation's new deep water terminal and stockyard at Hunterston, on the Firth of Clyde.

This new terminal will handle some of the world's largest ships, and the unloaders will be capable of a throughput of 3,000 tonnes per hour making them the largest of their kind in the U.K. The unloaded ore will be transported by overland conveyor to the stockyard area, where it will await transport to BSC's Ravenscraig steel-making complex.

The electrical equipment to be provided for each unloader will include 11 kV switchgear, a 2,250 hp Ward Leonard motor-generator set, dc motors ranging from 150 to 945 hp with associated control gear, transformers, ac motors and motor control centres, and the driver's control console. The major items of electrical equipment will be built in GEC factories at Rugby, Kidsgrove, Manchester and Bradford, and the ore-unloaders are expected to be operational in 1978.

Trunk road diversion

THE London-Penzance trunk road, the A303, is to be diverted for one mile about 27 miles east of Exeter.

The £1.29m. contract has been awarded to A. Monk and Co. by Devon County Council. Included with the roadwork is a ½-mile realignment of the River Yarty and construction of a bridge.

North Sea oil plant

TAYLOR WOODROW Construction has been awarded a £650,000 contract for the erection of pipework and mechanical plant at Hartlepool, Cleveland, for Simon-Carves.

The plant will form part of the Phillips Norway Group Ekofisk North Sea crude oil treatment and storage facility located on Seal Sands in the Tees estuary and will involve the erection of some 70,000 feet of pipework in diameters up to a maximum of 38 inches.

Big road job for Fairclough

OVER £5m. of work is to be carried out by Sir Lindsay Parkinson and Co., Southern Civil Engineering Division, of Leonard Fairclough, which is to build a dual two-lane road improvement on the A38 Exeter/Leeds trunk road at a cost of £4,915,017 for the South Western Road Construction Unit. Work starts this month and the road runs from the Almondsbury Junction on the M5 to the Southmead roundabout and calls for 10 major structures including two interchanges, five road bridges and three sub-ways.

The same division has a 14 month contract for work at Barrow Heath Scheme Suffolk reservoir and pumping station for the Anglian Water Authority—Lower Ouse Division—at a cost of £219,471. Consulting engineers are Pick Everard, Keay and Gimson, Leicester.

Looking into the future

A MULTI-NATIONAL study of the construction industry in 23 countries has just been launched by Battelle's laboratories in Colombus Ohio, Frankfurt, and Geneva.

In the three-year study, being jointly supported by a number of companies, the research team will develop both trend and annual forecasts for the residential, non-residential and non-building sectors of the industry. A brief report will also describe the current situation and problems.

Research will cover 11 countries in the first year—Saudi Arabia, Egypt, Iran, Kuwait, Iraq, Qatar, Algeria, Indonesia, West Germany, France, and the United States; seven countries the second year—Sweden, Spain, Japan, Mexico, Brazil, Venezuela, and the United Arab Emirates; and five countries the third year—Colombia, Libya, U.K., Italy, and Australia.

Individual reports on each country will be issued once the country investigation is complete and updates will also be issued in subsequent years.

INSULATION

Foam-fill rules should be respected

FOAM FILLING of cavity walls for heat retention has now aroused such a storm of concern among users, local authorities and the Department of the Environment, that the market is understood to have declined very sharply even for the best-known names in industry.

Department of the Environment recently gave new instructions to town halls about the problem — asking that rules should be softened since failure was rare — and the Agrément Board, whose basic studies provide the guidelines for foam infill, has found it necessary to restate the position.

The Agrément Board, building materials and methods certification agency sponsored by Department of the Environment, held a guidance session in London last week.

"Provided the customer has assured himself that the installer and supplier of cavity wall insulation hold Board certificates, and that the work is carried out in accordance with the stipulations in the certificate, there should be no subsequent problems with such insulation," Lord Peddie, Agrément Board chairman, said.

Most of the major suppliers and installers of cavity wall insulating materials in the U.K. are so certificated, but Lord Peddie warned particularly against the activities of "cowboy" operators offering to carry out a cheap job. In one case, where criminal action followed, it was found that the so-called insulating team had been filling the wall cavity with detergent foam.

Pointing out that it was the householder dealing with door-to-door salesmen who was most at risk, simply because most people do not have the necessary technical knowledge to assess properly the situation, Lord Peddie emphasised that the best protection was the Agrément Board Certificate.

Three materials

There are three materials in general use for cavity fill insulation—glass fibre, which can only be installed in batts during the construction of the building; mineral fibre; and urea formaldehyde foam. The last two can be installed in either buildings under construction or existing buildings.

Agrément Board certificates have been issued in respect of suppliers and installers of all three materials.

According to the Board, all three materials, properly formulated and installed, will last the life of the building, and while being permeable to water vapour (that is, moisture can "dry out") will not normally transmit water by capillary action.

There is no capillary transmission of water in the case of mineral fibre the Board asserts, and although shrinkage cracks in foam may transmit moisture, the risk is reduced to negligible proportions if the Agrément Board specifications are followed.

Drainage for clay ground

WHEN A load is imposed on clay or organic soils, the water contained in them is pressed out and the earth settles. In thick layers of clay, this may take years, even decades.

To speed the process vertical drains are installed. These are usually of sand, fed into a steel pipe which is driven into the clay and afterwards withdrawn. Unfortunately, the sand drain can produce horizontal surface movement and considerable reduction in the shear strength of the soil.

A Swedish company has developed a different approach which is stated to be capable of draining areas hitherto considered uneconomic as building sites.

Paper sleeve

A ribbed polyethylene strip, 95 mm wide and 3 mm thick, is enclosed in a high wet-strength paper sleeve. Water filters through the paper and down the channels, which provide a total cross sectional area of about 200 square mm, providing drainage equivalent to a 130 mm diameter sand drain. The drain is supplied in 150 metre rolls.

When being driven into the ground a steel sheath protects the drain, but it is much lighter than the pipe used for sand drains. Installing the Geodrain, as it it known, is usually carried out with equipment specially developed by Linden-Alimak, which is a drilling mast mounted on a tractor. This has a driving force of 3 tons and can place the drain to a maximum depth of 12 metres.

Installing Geodrain at an average depth of 7 metres, this equipment can place 1,800 metres in a working day, about a fifth of the time required for sand drains.

Geodrain is made by Terrafigo AB, Götgatan 15, S-41105 Gothenburg Sweden (031-11 43 19).

Turntable ladder

ELECTRO - hydraulic control from three locations plus an angle range that takes it below the horizontal by 17 degrees are two features incorporated in the latest 100 feet turntable ladder developed by Merryweather and Sons.

Adaptable to any 16-ton two-axle vehicle, the ladder can be elevated from minus 17 degrees to plus 75 degrees and used as a bridge if need be.

The electro-hydraulic control system allows for operation from the main console at the ladder base, from the two-man cage at the top, or from a remote ground station on a wandering lead. The three-lever controls are designed to give smooth, accurate ladder control in any position, particularly providing an inching facility that really is "inching."

The cage, maintained in the upright position by electrically-driven non-reversible screw jacks, can also be removed and the ladder fitted with a monitor to provide a versatile water tower for fire fighting. A ladder pipe can be fitted to the monitor, together with a 400 gallons-per-minute booster pump.

The ladder, of welded steel section, is extended by dual steel cables and housed by a single steel cable—all run from a single winch motor and cable drum assembly. Maintenance is simplified by the use of plug-in circuits, gasket-mounted hydraulic valves and ease of accessibility.

Merryweather and Sons, Greenwich High Road, London SE10 8LH. (01-692 7100.)

£2m. awards to Rush & Tompkins

TWO CONTRACTS totalling over £2m. have just been won by Rush and Tompkins.

The biggest, worth £1.6m. is for Barclays Bank at Ashdown Park, Sussex. The work involves extensive alterations to a convent to create a managerial training hostel.

The company has also been awarded a £520,000 contract at Queen's Gardens, London W2, by Venta Quest. This calls for the construction of the superstructures to 30 luxury flats and maisonnettes while retaining the facade of the original building. There will be a basement, ground and seven upper floor levels.

Office block at Heathrow

A CONTRACT worth over £1m. has been awarded to Holland, Hannen and Cubitts Construction (London) by the British Airports Authority for an office block at London (Heathrow) Airport.

The four-storey building will offer 3,600 square metres of office space and is part of the programme started by the British Airports Authority for enlarging Terminal 2.

The Authority has also awarded a £636,000 contract to Marryat Jackson Norris for electrical services for the western extension of the terminal at Gatwick Airport.

This contract includes internal and external lighting, power distribution, an automatic fire protection system, illuminated signs and public address equipment.

IN BRIEF

- The London Borough of Southwark has awarded a £950,000 contract to W. J. Simms Sons and Cooke (Southern) for 83 flats and houses. Completion is due by the end of 1976.
- The Air Cushion Division of Mears Construction in conjunction with its Belgian Associate, Nobels-Peelman, has moved a 185 ton 27.5m diameter tank a distance of over 500m at the Ruien power station near Oudenaarde, Belgium.
- Ward, Ashcroft and Parkman of Liverpool, have been appointed to collaborate with Shell Chemicals (U.K.), at the Carrington chemical complex on the design aspects of extensions and alterations to production plants.
- Contracts totalling over £450,000 have been won by the John Willmott Group. They are for the second phase of Middle School, Flitwick, Beds., (£147,897), for a children's centre at Kempston (£102,662), both for Bedfordshire County Council, and for a day centre for the mentally ill for the London Borough of Camden (£201,000).
- Structural Fireproofers, a subsidiary of Sika Contracts and a member of the SGB Group of Companies, has been awarded a contract valued at almost £½m. for the fireproofing of the National Westminster Bank's new headquarters in the City of London. Currently under construction, the 185 metre high building will comprise 46 floors and when completed, will be the tallest office building in London. This is thought to be the largest-ever single contract in the U.K. for structural fire protection. It will involve the coating of structural steelwork and the soffits to all the concrete floors with Mandolite P20, a fireproofing compound which complies with the requirements of B.S. 476.

The Government's continued reluctance to introduce import controls on textiles has acutely disappointed the U.K. industry which had looked for immediate relief. **Rhys David** reports

A costly thread of survival

AFTER MANY months of pressure, for measures against cheap imports, the British textile industry was rewarded in Mr. Harold Wilson's much heralded statement in the Commons last Friday with more assurances than action. Though some positive measures may follow the discussions Mr. Harold Lever, Chancellor of the Duchy of Lancaster, is to have with industry representatives, the statement itself has largely confirmed that the Government remains reluctant to introduce import controls even on a selective basis.

For the rest, Mr. Wilson largely went over old ground, repeating known Government policy on the textile industry. The GATT Multi-Fibre Arrangement talks, which the Prime Minister said would offer more protection to textiles than ever before, have been going on since the start of the year. Other statements that the Government would act where evidence of dumping was established repeat a commitment made many times.

Capacity

Similarly, the comment that the Government did not want to see the loss of viable capacity has been made before, most recently in a textiles debate in the Commons earlier this year. Surprisingly, even the surveillance system, now operating for textiles, is not to be extended to clothing, though this is likely to be one of the first points the industry will now take up.

Effectively the Government has replied to the industry's pleas for immediate action with a package designed essentially to give medium to long-term aid. The provisions of the Industry Act, 1973—already being used to advantage in wool textiles—will be applied to other textile sectors, with clothing likely to be the first on the list. Schemes under this can hardly hope, however, to come into fruition in less than several months, at the very least. Similarly the stockholding scheme suggested by the Prime Minister as a way of maintaining production at maximum levels—only the vaguest details of which appear as yet to have been thought out—is something which might help in the next recession, not this one.

The sketchiness of the Government's proposals undoubtedly owes much to the fact that they were rushed out in response to industry appeals for a reply to the demand for imports to be reduced by 20 per cent. from 1974 levels, made by the British Textile Confederation several months ago.

But, equally, the decision not to accept the industry's own proposals for its salvation does suggest that in both Whitehall and Westminster there remains some doubt as to whether textiles is suffering very much more than other sectors of the economy in the present recession or that, if it is, the situation is bad enough for Britain to risk unilateral action in its support.

Delayed

One thing that has been clear for some months is that the longer the Government delayed short-term action to aid the industry the better was the chance that, on the surface at any rate, the problem would appear to be receding, even though mills would close in the meantime, workers would be thrown out of work, and some parts of the industry might disappear.

The problem has been caused, to some extent, by the continued buoyancy of U.K. demand for textiles at a time when trade in most other developed countries has been greatly reduced. Thus clothing sales last year were only 1 per cent. down on 1973 in volume terms. In the first three months of this year, there was actually a 5 per cent. advance on the same period of 1974. The U.K. industry, particularly up-stream processes like spinning, has been affected, however, because a lot of this demand has been met either by destocking right up to retail level or by imports, which have been diverted to the U.K. from other less buoyant markets, including the U.S.

During the past few months, however, a number of significant trends have emerged which suggest that the imports pressure on the U.K. industry may be relaxing from now on and it was these trends to which Mr. Wilson drew particular attention in his statement. He pointed out that in a number of sectors imports had fallen this year. By volume, the most important indicator, imports of textiles excluding clothing, fell from 116,753 tonnes in January-March 1974 to 96,201 tonnes in the same period of this year. In clothing the January-March 1974 figure was 22,456 tonnes and this year's 20,796 tonnes. Within these categories yarn and thread imports were down from 34,844 tonnes to 31,891 tonnes and fabric from 53,664 tonnes to 41,152; woven cotton cloth fell from 29,010 tonnes to 18,196 tonnes.

Although imports have fallen this does not provide, as the Government seems to suggest, a very reliable guide to the state of health of the domestic producers. The textile manufacturers, and in particular the fibres manufacturers, have been running their plants at below 75 per cent. capacity in some cases for several months, more than matching the drop in imports. The only explanation given continued high levels of retail activity is that destocking is still taking place, and according to some manufacturers there is evidence that the process still has some way to go.

Competition

The effect of imports even on a reduced scale is being felt by the U.K. industry in another way. Competition for business remains very keen with the result that U.K. manufacturers have been unable to recoup higher costs over the past year and, as in the case of the fibre producers, are being obliged to trade at a loss. In seeking a 20 per cent. reduction, therefore, the manufacturers were looking for two gains—the chance to return to higher levels of output and plant utilisation and the possibility of being able to trade more profitably.

In ignoring this case, however, the Government may also have been influenced by another trend which has begun to emerge in world textiles. Though it is too early to point to any general revival of demand, at the beginning of the processing chain some stirrings can be observed. Cotton, after reaching a quoted price of 90 U.S. cents per lb in January, 1974, fell back throughout the year to only 46 cents by February of this year. Since then, however, the cotton price has moved to 54 cents—a 17 per cent. increase—on a steadily rising trend. Wool has also risen in price as a result of renewed Japanese buying at the Australian auctions. The Australian Wool Corporation, which for much of the present season has been buying in more than half the wool on offer at a floor price of 250 cents, has been able to bow out and the price has climbed to 25 cents above the floor.

Some of the leading fibre producers have also been making more hopeful noises recently. At the recent Interstoff textiles exhibition in Frankfurt one of the leading German fibres producers reported an upward trend in demand, with acrylic sales likely to improve by 30-40 per cent. in the second quarter compared with the first three months of 1975. Some hardening has also recently been taking place in polyester staple prices around the world. The better showing of all the fibres—natural and man-made — may simply mean that spinners have begun to exhaust stocks and not that there may be a return to significantly higher overall levels of demand. Nevertheless, in Germany, Japan, and the U.S. and some other less important markets, the feeling would now seem to be that in textiles the bottom of the trough may have been plumbed.

Recession

*Britain was the last market to be affected by the textile recession because of the continued high level of retail spending and may well be that it emerges from the trough later than some other main textile consuming nations—a factor which could again present the industry with problems. The fear is that many companies, having managed to hang on through the recession with reductions in their stock levels and manpower, could be bankrupted by any upturn. If raw material prices now begin to rise many companies could find it extremely difficult to replenish their stocks when the upturn reaches Britain; even some of the bigger companies might find it difficult to return to the levels of production suggested by world demand.

This is another major reason why the industry had been hoping for some short-term aid which would have provided it with some protection in the home market during the next six difficult months. But in coming out against import restrictions one other factor has also clearly played a major part in the Government's thinking—the negotiations which the EEC is now holding with textile producers in the developing countries on future import levels under the GATT Multi-Fibre Arrangement.

Britain at present is in the somewhat delicate position of having persuaded her EEC partners to agree to a new burden-sharing arrangement which should result in a fairer distribution within the Community of the Third World textile imports, a large proportion of which now come into the U.K. In the only negotiations which the Commission has so far completed, India will be allowed to increase its imports into the EEC as a whole of cotton products by 7 per cent. per annum but Britain, which accepts some 70 per cent. of those imports at present, will only be expected to take a further 0.5 per cent. per annum.

Though the U.K. textile industry has been stressing that its request for import restrictions is intended only as an emergency measure, there is the danger that unilateral action could upset other Common Market countries which have agreed to assume *some of the burden.*

Delicate

Mr. Wilson pointed out that unemployment in the textile industries of some EEC countries has been higher than that in the U.K. Clearly if Britain decided on protectionist measures some of those countries might be tempted to suggest that implementation of the burden-sharing formula should be delayed.

For the industry this inevitably looks like a case of jam, maybe to-morrow, and its main reaction to the Prime Minister's statement has been one of acute disappointment. Nevertheless, the industry has succeeded in gaining widespread public awareness of its problems, and Government interest and involvement in its future in the shape of whatever Industry Act schemes emerge. For the present it is being asked again to hang on, however, and although well used to this, only time will tell at what cost.

BRITAIN'S TEXTILE IMPORTS

	Jan.-March, 1975 tonnes	Jan.-March, 1975 £'000s	Jan.-March, 1974 tonnes	Jan.-March, 1974 £'000s
All textile products (ex. clothing)	96,201	166,753	116,319	169,545
Clothing	20,796	111,009	22,456	105,557
Raw Materials	86,159	48,370	115,770	79,463
Cotton	37,150	14,274	47,125	21,626
Man-Made Fibres	18,726	10,364	23,528	11,816
Made-up articles	6,584	12,181	7,754	11,668
Yarn and thread	31,891	37,031	34,844	39,163
Cotton, unbleached	4,946	5,311	6,809	8,441
Synthetic fibres	19,224	22,893	18,456	20,779
All textile fabrics	41,152	86,974	53,664	90,205
Woven cotton cloth	18,196	31,652	29,010	42,324
Grey, unbleached	11,497	12,999	20,901	25,496
Others	6,699	18,653	8,109	16,828
Man-made fibre cloth	15,671	44,536	15,224	37,622
Floor-covering, tapestries	6,298	12,986	7,481	11,168

APPOINTMENTS

Goodyear European planning post

Mr. H. G. Luteman, director, corporate planning for the GOODYEAR TYRE AND RUBBER COMPANY in Great Britain has been appointed director, corporate planning covering activities throughout Europe. He is based in Brussels.

★

Mr. Kenneth Sutton-Jones has been appointed managing director of AGA NAVIGATION AIDS.

★

Mr. L. E. Wingrove has been appointed MOBIL group secretary in the U.K. in succession to Mr. R. A. Williams who is curtailing his full-time business activities on medical advice.

★

Mr. Peter Living has been appointed assistant managing director of the automotive products division, of MOTOROLA.

★

Sir Cyril Hatty is to become chairman of GLOBE AND PHOENIX GOLD MINING COMPANY local management committee in Rhodesia.

★

Mr. R. G. Glenn, secretary and investment manager of the NATIONAL MUTUAL LIFE ASSURANCE SOCIETY, is retiring on May 31. He will also retire from the Board but remain as a consultant. Mr. W. P. Jackson has been appointed secretary of the Society and of its subsidiary the St. George Assurance Company, and Mr. Alan Pendleton, is to be investment manager of the society from June 1.

★

M. J. H. Hammill has resigned from the Board of BRITISH STEEL CONSTRUCTIONS (BIRMINGHAM).

★

Mr. E. C. Trinder and Mr. G. W. Matthews have been appointed to the Board of HENRY BATH AND SON.

★

Mr. M. D. H. Hill has joined CHANDLER HARGREAVES, WHITTALL (AVIATION) as assistant director.

★

Mr. C. P. A. Bertie will be joining BURGE AND CO., stockbrokers, as a partner on June 2. He is at present an associated member with J. and A. Scrimgeour.

★

Mr. Robert J. Clayton technical director, the General Electric Company, will become president of the INSTITUTION OF ELECTRICAL ENGINEERS.

Mr. Clayton will succeed Mr. J. H. H. Merriman, Board member for technology and senior director: development, Post Office Telecommunications headquarters, as president of the IEE on October 1.

★

Mr. J. G. Sanger has been appointed financial director of BLYTH GREENE JOURDAIN AND CO.

★

Scandinavian Bank, London, has made the following appointments for its subsidiary in Hong Kong, SCANDINAVIAN FAR EAST: Mr. Martin P. Lee-Warner, director and general manager, Mr. Tonny Bech Pedersen, foreign exchange manager, Mr. Andrew L. I. Pocock, manager-credits. Mr. Lee-Warner has also been appointed representative for Scandinavian Bank in Hong Kong.

★

The London branch of the BANK OF YOKOHAMA opens to-day. Mr. J. F. Hill is chief manager, Mr. H. Yoshida, manager, Mr. Y. Maeda, deputy manager, and Mr. R. D. Sawyer, foreign exchange manager and chief dealer.

★

Dr. E. John Cullen, deputy managing director of ROHM AND HAAS (U.K.) since 1971, has been named as the company's new managing director and chief executive. He will take over the appointment on June 1 from Mr. C. B. Pyle, who is returning to the U.S. as marketing manager of the plastics division at the company's headquarters in Philadelphia. Succeeding Dr. Cullen as assistant managing director is Mr. Albert H. Caesar, who will transfer from Philadelphia to take up the appointment.

★

Mr. T. F. Allen has been appointed chairman of DELTA TUBES, following the resignation of Mr. I. R. Beattie from July 1, when Delta Capillary Products is transferred from Delta's rod division to its building products division. Mr. Walter Greig has become a director and general manager of Delta Capillary Products.

★

Mr. P. F. A. Nash, Mr. A. P. Perry Lewis and Mr. D. J. Tickner have been appointed directors of R. P. MARTIN EXCHANGE.

★

Mr. Paul Engstrom has been appointed chief actuary to the EXCESS INSURANCE GROUP, with responsibility for all actuarial functions involving life/health, fire and accident.

Oil pollution exercise plan for Clyde

A COMBINED oil pollution and marine casualty exercise will be held by the Department of Trade and the Ministry of Defence (Navy) off Ardrossan in the Firth of Clyde on May 29.

The exercise, in which the Royal National Lifeboat Institution will participate, will simulate a collision between an oil-tanker and a dry-cargo vessel, leading to an escape of oil from the tanker. A fleet of vessels will be employed to carry out oil dispersal techniques. The dry-cargo ship will be assumed to be sinking and an "explosion" in the tanker will lead to a rescue by a Royal Navy helicopter.

هكذا اصله الأصل

The Executive's World

EDITED BY JAMES ENSOR

Could business run cities better?

BY JAMES ENSOR

THE FATE of New York, with its potholed streets, garbage-covered streets, and soaring murder and mugging rate may hold out a nightmare vision of the future facing some of Britain's cities. The familiar cycle of deteriorating public services leading to the emigration of the middle class from the city centres and thus to a further deterioration in revenues and services has not yet been felt in Britain. But the pattern of city centre ghettoes, with high immigrant populations, rising crime rates and deteriorating public services is apparent in South London, Glasgow and other British cities.

The problem in New York and other big U.S. cities is compounded by the fact that public service employees, with strong unions and the ability to cause political strikes, have become among the cities' highest paid workers. At the same time, the productivity levels in city service are strikingly lower than in most private businesses. There is little incentive for innovation, mechanisation or the entrepreneurial approach to business problems. Thus cities continue to use out-dated inefficient methods while the problems and costs mount up.

Large numbers of American consultants have studied the problem of the decay of U.S. city life and analysed the organisational efficiency of the city bureaucracy. A study prepared for the U.S. National Commission on Productivity and Work Quality, for instance, describes "A ponderous legal and procedural structure for local government, a modus operandi which will slow the progress of the most routine action and which exacts special penalties for any departure from established practice. It continues: "Personnel selection, employment and termination are typically impeded by rigid and perverse civil service systems." The same words could be used of Britain.

Mr. Peter Drucker, the celebrated American management expert, comments that "The elaborate safeguards built to protect the administrative structure within government against the political process . . . also protect the incumbents in the agencies from the demands of performance." This leads to a situation where entrepreneurial attempts to obtain constructive change carry risks but little reward for senior local government officials, as well as for local politicians. Attempts to make changes inevitably arouse hostility from local interest groups, unions and sometimes voters.

A possible solution, recommended by Mr. John Diebold, the American consultant who has specialised in automation but more recently turned his attention to the problems of cities and to developing countries, is "Privatisation." This jargon was coined to refer to the introduction of private entrepreneurs into state management.

Mr. Diebold shares with Sir Don Ryder the belief that the ideal mixed economy is one where the sectors are mixed, with private and public concerns competing in each. Mr. Diebold points to the competition between the BBC and ITV companies as an ideal arrangement, with the BBC upholding the public interest criteria but being kept on its toes by the more entrepreneurial and market-oriented independent television contractors.

The same principles can be applied in local government. For instance, New York hospitals which are municipally owned and financed are operated by the independent Health and Hospital Corporation and draw much of their staff from private medical schools and private hospitals. Mental hospitals are contracted out to the State Mental Hygiene Fund, which has in turn appointed private builders to build three new ones.

The relevance of such a mix of private and public bodies is sharply brought home to Britain in comments made by Mr. Mahlon Apgar, who heads

Terry Kirk

the local authority consultancy operations of McKinsey. He suggests that conversion costs of a run-down Georgian terrace, which may cost one London council £12,000 per flat could be performed by an efficient private builder for £6,500.

He adds that another council has taken 14 months, on average, to plan and design improvements to 100 recently acquired properties, before any work on the site could even begin. Using efficient, simple procedures, typical of private business could cut this time to one month.

Another London borough, according to Mr. Apgar, takes an average of eight weeks to process home loan applications and in exceptional cases can take six months. Yet building societies take on average only three weeks and have completed the formalities in as little as two days.

The waste of resources inherent in bureaucratic local government procedures can be enormous, particularly where building work is concerned and expensive plant and equipment may lie idle. The average house being converted by a local authority remains empty for between 10 months and three years: yet a private builder can usually begin work on the site in a maximum of two to four weeks. As Mr. Apgar points out, the loss in wasted interest alone can amount to £3m. for every 500 families who are needlessly obliged to wait for better housing.

In New York, it is quite common to sub-contract development work out to private corporations. For instance, the new town on Welfare Island is being managed privately under a contract let by the State Urban Development Corporation.

Many of the more routine cleansing and maintenance opeartions in New York have also been let out to private business, in recognition of the city's inability to manage them with its own recalcitrant workforce.

Refuse collection, sewer cleaning, the removal of derelict cars (which is done free by scrap metal merchants instead of costing the city $50 each) and the maintenance of street lighting are all contracted out to private concerns. A more unusual feature is that the processing of local income-tax returns are contracted out to the First National City Bank.

New York, of course, hardly provides a good example of the successful application of business methods to city management. Indeed, it was the increasing irritation of local residents with the bureaucratic pace of school and hospital construction and urban renewal which led to most of New York's building programme being contracted out to private architects and private building companies. Since then, one such organisation, Curmco (City Urban Renewal Management Company) has been wound up because it proved no more efficient than the city authorities.

Even where private concerns can outperform the public authorities, demonstrably, there remain certain fears in the public mind which would have to be stilled before "Privatisation" could be put into effect. Few people like the idea of privately run police forces, for example, though private detectives have been used in Delaware to supplement the local force and St. Petersberg, Florida, hired police extras from private concerns to work during peak hours of vandalism.

The possibilities of corruption, which are enormous where huge building contracts are concerned, also present a worrying aspect of the use of private, profit-making contractors. The American study argued "Local governments have relied primarily upon competitive bidding as a means of assuring that the goods and services are obtained at the lowest possible price. But competitive bidding is not feasible for many services and, moreover, is itself subject to corruption through collusive bidding." It has been widely alleged, indeed, that the private refuse collection work in New York has become a breeding ground for the Mafia.

Even where a local government decides that some service should be contracted out to private enterprise, it becomes difficult to prove whether private or public services are more effective. A New York investigation tried to determine whether the Department of Sanitation or private concerns had the lower costs for collection per ton of solid waste. The City Administrator's Office, the City's Environmental Protection Agency and the independent Citizen Budget Commission each came to different conclusions. Much time and public money was therefore spent on analysing rubbish collection to little benefit.

Often, the accounting systems used by local authorities produce a different view of costs to those which would apply in a commercial concern. For instance Mr. Apgar cites the problem of the tens of thousands of potentially usable houses which have been demolished and not replaced for years because councils do not levy a charge for capital employed in owning empty sites. The argument that it is cheaper to hold cleared property is, he argues, economically self-defeating.

It is by no means evident that the contracting out of a large part of city servicing needs to private companies would solve the urban problems of London or Glasgow — and they clearly have not solved New York's. But as rates rise inexorably and the cost of city management absorbs an ever-growing share of the total national income there will be an ever more vociferous demand for the efficiency measures and work standards of private industry to be brought into the management of the city.

Swiss rules may force Nestlé to switch HQ staff

BY NORRIS WILLATT

THE EVER-TIGHTENING restrictions on granting work permits to foreigners in Switzerland may compel Nestlé to decentralise outside the country some of the operations presently carried on at the company's headquarters in Vevey, on Lake Geneva. Meanwhile, Nestlé is feeling the impact of the policy already, in other ways.

Like most multinational corporations which are based in Switzerland, both domestic and foreign, Nestlé makes it a regular policy to rotate executive and other personnel between the parent concern and its many allied companies, as it prefers to describe its foreign affiliates. Now, according to the recently issued 1974 annual report, this process has become practically impossible.

This states that "in some cases it has not even been possible to obtain working permits for highly qualified personnel whose transfer to Vevey fulfilled an urgent need which it was impossible to satisfy on the Swiss labour market." This is not a problem for Nestlé alone, by any means. But the Swiss food giant is particularly hard hit since 40 per cent. of the executives working in Vevey are foreign nationals.

Foreigners

In the ordinary way, many of these after spending a few years in Switzerland would be transferred back to their own countries, usually to take up responsible management positions there. Nowadays, Nestlé may be loathe to let them go, from a virtual certainty of not being able to replace them by other foreigners.

This is a handicap both for the company and the individuals involved. Nestlé can't proceed with programmes of job rotation, which is part of the normal process of grooming executive talent. In addition, most of its training programmes for staff at all levels have been based on Vevey, and these are also disrupted.

For executives chosen for advancement within the management hierarchy, a vital phase in their career planning is now threatened: they are no longer able to gain the more or less indispensable headquarters experience. Nestlé also emphasises the adverse effect upon its policy of seeking talent in the developing countries, where a large part of its total effort nowadays takes place.

Locals

Thus of the little over 300 Nestlé factories all over the globe at the present time, 88 (or nearly 30 per cent.) are in the developing nations of Asia, Africa and Latin America. In recent years, the Swiss concern has been developing a growing share of the responsibility for running these companies on local nationals, which has involved bringing many of the latter to Vevey for training.

Hence, the suggestion that in the future the company may have to transfer some of these and other activities outside the borders of Switzerland. Eventually the step seems inevitable, as the only possible solution. Any relaxation by the Swiss authorities of their present labour permit policy seems highly unlikely.

Nestlé itself points out that the rejection by the Swiss people in a popular referendum of last October of an initiative by the Right-wing National Action Party to tighten drastically even the existing regulations has hardly improved the situation at all. Now, the same party is returning to the attack by launching a new initiative which calls for the imposition of a special tax on all firms which employ more than five foreigners. Nestlé, with several hundred on the payroll at Vevey, would be a prime target.

People should retire when they want

BY GWILYM ROBERTS, MP

THE GOVERNMENT'S new pension provisions not only fail to remove sex discrimination they also fail to take effective steps to encourage active men and women to remain at work, or to make provision for those who need to retire early.

It is incredible that in 1975 a Government stressing the removal of sex discrimination is perpetuating a system whereby the retirement age for women is 60 and that of men is 65. The anomaly is, of course, heightened by the fact that the life expectation of a woman at 60 and 65 is some four years greater than a man of the same age. The following extract from the 1974 Annual Abstract of Statistics shows that the life expectation of a man of 65 is 12 years while that of a woman of 60 is nearly 20 years.

Britain has a rapidly ageing population. In 1911 only one in 17 was over 65; by 1955 the proportion of over 65s had reached one in nine and now it is nearly one in seven. The 1942 Beveridge Plan—Social Insurance and Allied Services—appreciated this ageing-population problem and proposed that

Life Expectation (Years)

AGE	MALE	FEMALE
60	15.2	19.8
65	12.0	16.0
70	9.4	12.4

"the conditions governing pensions should be such as to encourage every person who can go on working after reaching pensionable age to go on working and to postpone retirement and the claiming of pension." Yet in 1975 an enquiry at the Department of Health and Social Security suggests that apart from preparing answers to parliamentary questions they have not done any work on variation in the retirement age. Mainly because "Ministers" are opposed to the idea.

My view is that we should try to provide a retirement range between 60 and 70, common to both sexes. The aim would be to enable those who needed to retire due to ill health, or other reasons, in the earlier part of the range to do so with an adequate pension while at the same time giving real encouragement for the majority to remain at work into their later sixties. The figures from the latest Census show that at the moment only some 30 per cent. of males and 13 per cent. of females are still economically active after the age of 65.

	60—64		65—69	
	Males	Females	Males	Females
Total in age-group	1,463,900	1,670,000	1,169,945	1,477,065
Economically active	1,267,575	470,900	357,550	190,055
Economically active as % of total	86.6	28.2	30.6	12.9

In fact, the problem is more complex as there is a substantial shift towards earlier retirement. The proportion of men taking their pension within four weeks of their 65th birthday increased from 45 per cent. in 1959 to 69 per cent. in 1973. While one man in seven deferred his pension until 70 or over in 1959 it is now only one in 15.

The first difficulty is providing an adequate level of pension for those forced to retire at the bottom of the retirement range. Clearly the cost of offering the full existing pension (in real terms) for both sexes at 60 would be prohibitive — an estimate of £1,440m. was given in reply to my recent Parliamentary question. This estimate may be statistically meaningless as the take-up is uncertain but clearly it would involve a very large cost. To avoid pensioners at 60 having to accept something less (in real terms) then the take-up of earlier retirement would have to be kept to a minimum by offering active men and women adequate incentives to defer retirement. Since many of those seeking early retirement come from heavy manual jobs there is also a strong argument for pushing company pension schemes in these areas. The National Coal Board has a supporting pension scheme of this type and other industries should be encouraged to follow suit.

The major problem is to determine what pension incentive is required to persuade people to carry on working. The failure of the existing pension scheme to convince men of the advantage of postponing retirement from 65 to 70 is understandable. A married man earning the average wage of £47 and paying graduated contributions since 1961 would be entitled at 65 to a total pension of £20.17. After he deferred his pension for five years until he was 70 then his entitlement would be only £26.63 (at 1975 pension levels). This represents a deferment incentive of under 6¼ per cent. per annum.

Company pension schemes are by no means over-generous in this respect: many of them offer only 6 per cent. per annum in pension addition for deferring retirement until after the normal pension age. One or two of them, however, like George Wimpey and Company, offer ¾ per cent. per month, a more realistic 9 per cent. per annum for deferring retirement.

In the final quarter of the twentieth century we will have to give more and more attention to the complex problems of retirement and the need to persuade men and women to remain at work.

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TUESDAY, MAY 27, 1975

Resistance to import curbs

THE PRESSURE on the Government to introduce import controls, either general or selective, has been growing steadily in the last few months. Quite apart from the arguments put forward by the "Cambridge Group" of economists and others, there have been appeals from several major industries—notably cars and textiles—for special protective measures. The Government has obviously considered the possibility of import controls as one way out of our present balance of payments troubles, but so far, at least, the threat of retaliation from our trading partners has been a strong enough deterrent. As for the demands from individual industries, the Government has done little more than express sympathy and promise to examine the facts of each case.

Negotiations

In textiles, the Government was right to reject the manufacturers' request for an immediate 20 per cent. cut in imports. The recession has certainly hit this industry hard, and it has always been peculiarly vulnerable to low-cost imports from developing countries. But successive Governments have decided that the problem is best dealt with on an international basis. Under the Multi-Fibre Arrangement the European Commission is negotiating with individual exporting countries to ensure that the rate of growth in their sales to the EEC is controlled and that the burden is shared fairly among all the EEC countries: at present the U.K. takes a disproportionately large share of these imports.

The Prime Minister pointed out last week that to take unilateral action on imports while these negotiations were in progress would be contrary to our GATT obligations and would provoke retaliation. Many textile companies are facing serious problems and the fact that imports are continuing to come in on a substantial scale (though below last year's levels) makes their situation worse. But the provision of short-term relief to this industry would only damage the prospects for U.K. trade as a whole.

It is true that during a world recession, when exporters are scrambling for whatever business is available, there is a temptation to resort to "unfair" methods of competition, including the dumping of exports at prices that bear little relation to production costs or home market prices. But there is an established procedure for dealing with cases of this sort. If the Society for Motor Manufacturers and Traders can provide clear evidence that Japanese cars are being dumped in this country and that material injury to the industry is being caused, the Department of Trade has the necessary powers to take action.

The Government has shown its willingness to take action in the footwear industry, where imports from Eastern Europe have been growing rapidly. The Government has obtained an agreement from Romania, Czechoslovakia and Poland to cut back their exports of men's shoes by 5-10 per cent. this year, a reduction of some 300,000 pairs. Low-cost imports from the Comecon countries are becoming increasingly significant in several industries; since the export prices in some cases seem to be far out of line with home market prices, the anti-dumping machinery is clearly relevant.

Lack of supply

In several industries, however, the increase in imports over the last year or two has nothing to do with unfair competition, but simply reflects the inability of domestic manufacturers to satisfy the market. Supply problems in the steel and motor industries gave importers the chance to establish themselves: not surprisingly, they have proved difficult to dislodge even when demand has turned down. The domestic manufacturers created the problem and there is no reason why the Government should bail them out of it.

A testing week for Atlantic Alliance

THIS IS a week of many high-level meetings within the broad framework of the Atlantic Alliance. To-day the Foreign Ministers of the members of the International Energy Agency (IEA) meet in Paris. To-morrow most of the same Ministers will be attending the Ministerial session of the OECD. On Thursday and Friday most of them move to Brussels, accompanied by Heads of Government, for Nato.

The three organisations have slightly different memberships and different functions. Yet, this time, they have a number of common items on the agenda which can be broadly summed up as the need to maintain solidarity at a time of great financial difficulty.

Three fronts

That means establishing an agreed position on three fronts: towards the oil producers, towards the developing countries in general, and towards the Warsaw Pact. There is an overlap here, which is of relatively recent origin, simply because if the western economies are hit by another commodity crisis of the kind that the Yom Kippur war set off in oil, the will and ability to maintain adequate defence expenditures could be further weakened.

Dr. Henry Kissinger, U.S. Secretary of State, who will be attending all three meetings, has indicated that he has already taken the point. He has said that America is now conducting bilateral talks with a view to a resumption of the dialogue between producers and consumers which broke down in Paris last month.

This is a softer line than the U.S. has adopted in the past. It may owe something to the efforts of Mr. Harold Wilson at the Commonwealth Prime Ministers' Conference to begin a dialogue on commodities and financial stabilisation schemes. In practice, it amounts to a recognition that relations between developed and developing countries have been deteriorating and are likely to become yet more difficult unless rational discussion is resumed.

To ensure this, the West has still to resolve certain internal differences. It is far from clear, for example, whether the U.S. Treasury has yet come round to Dr. Kissinger's new way of thinking. Yet the alternative to a more rational debate with the developing countries is a further retreat into the sort of embittered rhetoric which is becoming the hallmark of so many international meetings and which, incidentally, has virtually killed the prospects of an early agreement on an international law of the sea. At the OECD meeting especially, Ministers could do something to reduce the tension.

By contrast, the confrontation between Nato and the Warsaw Pact should be rather easier to deal with. Taking strategic tactical nuclear and conventional forces as a whole, there is still a tolerable military balance between East and West, despite the Pact's increased defence spending and recent qualitative improvements.

The West has also displayed an impressive degree of unity in the various East-West negotiations which constitute detente. The danger, however, is that Nato countries will go ahead and cut forces unilaterally either because of domestic financial pressures or because they believe detente has become irreversible.

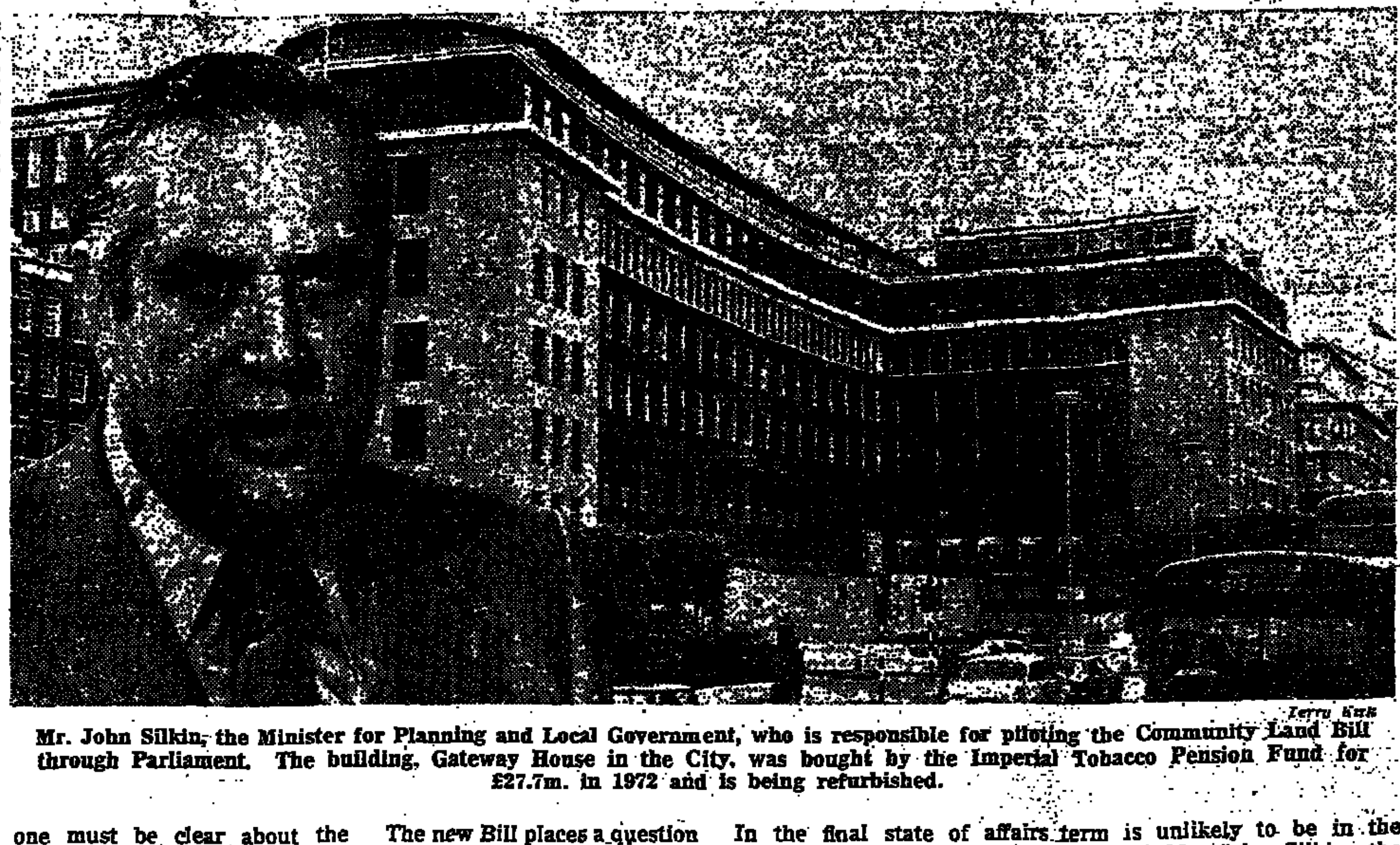
Moral gestures

In this respect, the attitude of the European Defence Ministers meeting in Brussels last week was disappointing. Most of them refused to give any kind of acknowledgment that the U.S.-Spanish defence agreements contribute to the defence of Europe or to give any encouragement to Spain's more moderate forces.

Given the way the Europeans have watched Portugal move to the left—against the wishes of the majority of its own people—this refusal to take an objective view of Spain is a luxury they cannot afford. Nato is entirely capable of maintaining the balance of power in Europe, but not by outdated moral gestures.

The prospect that institutions could pull out of property investment is real, reports **John Trafford**

A community battle over the Community Land Bill



Terry Kirk

Mr. John Silkin, the Minister for Planning and Local Government, who is responsible for piloting the Community Land Bill through Parliament. The building, Gateway House in the City, was bought by the Imperial Tobacco Pension Fund for £27.7m. in 1972 and is being refurbished.

THE news that some of the country's largest landowners are organising themselves to fight the Government's latest proposals for nationalising development land will come as no surprise. For it is easy to imagine a band of elderly gentlemen in plus-fours fuming over the iniquities of Socialist legislation. But the reality is rather different, for the landowners in question are the managers of Britain's leading life insurance and pension funds: and the battle they are fighting is one which affects almost every wage and salary earner in the country.

At the last count, a year ago, nationalised and private industry pension funds had £1.32bn. invested in real estate—much of it in offices, shops, factories and warehouses—and a further £274m. in property unit trusts. Between them, pension and life funds spent about £600m. on property investment in 1973-74.

Their interest in property is relatively recent. Private sector funds only started entering the field to any significant extent ten years ago, though among the big nationalised industry pension funds the National Coal Board showed the way in 1959. The idea then, as now, was to buy property freeholds as long-term assets to set against the fund's long-term liabilities. As a long-term investment property has offered a far better hedge against inflation in the post-war years than undated gilt-edged stock.

Fund managers' worry

The worry of the fund managers is that, if the Community Land Bill, now in its Committee Stage in the Commons, goes through without major amendments, they may well have to start pulling out of property investment.

To those who have watched the low rate of British investment in manufacturing industry and have seen the "unproductive" allure of commercial property investment, such a move may seem not only welcome but overdue. However, as politicians and businessmen have discovered following last year's slump in property values, a healthy property market is needed for a healthy economy. Property is a fundamental asset which companies use as collateral for their borrowings. Devalue it, and you destroy much of the creditworthiness of companies who need to borrow funds.

Thus the prospect of the institutions withdrawing from property investment is not to be taken lightly. All sides—industry, banks, the institutions themselves, policyholders, and pensioners—would feel the shock waves. The Government's dilemma now is to judge whether the institutions are engaged in an elaborate game of bluff or whether they really mean what they say.

In making such a judgment, one must be clear about the institutions' exact view of the Community Land Bill and its associated Development Land Tax. In essence they are worried about three things: the definition of "relevant development" (the kind of development for which land can and later must be acquired by local authorities); the length of leaseholds to be granted by local authorities; and finally the wide powers entrusted to local authorities and the Secretary of State to make compulsory purchases of land.

These three points mesh closely together in the mind of the institutional manager. If property is to remain a suitable investment vehicle for long-term funds, it must be a "safe" long-term asset. If the Bill goes through unamended, it may no longer seem to him so safe.

Right economic course

The worry over "relevant development" concerns both the properties which the institutions hold at the moment and the development schemes (or completed property) which they might fund in the future. Buildings, like everything else, wear out and the owners must undertake rebuilding, modernisation and expansion when this seems the right economic course to follow. The replacement of, say, an old office block by a new one has not posed many problems in the past. Under the 1971 Town and Country Planning Act, owners have been able to redevelop their properties under of the so-called "8th Schedule Tolerances." This in effect has allowed buildings to be rebuilt to their former floor area plus 10 per cent. provided the design was acceptable and neighbours' rights of light were not harmed.

The new Bill places a question mark over rebuilding. For it seems that any building that is demolished is by definition a candidate for "relevant development." If that is so, the local authority will have the opportunity to acquire the freehold of the property as soon as the present owners submit an application to carry out the rebuilding. Once the permanent land scheme envisaged in the Bill comes into effect (and no-one will make any guesses as to when that will be) local authorities would actually be obliged to buy properties in need of rebuilding.

If the Bill really worked this way in practice, the institutions would slowly find their existing freeholds being converted into leaseholds from the local authority. There is also the danger that the local authority, having compulsorily acquired the freehold, would not even offer the leasehold back to the institution to carry through the rebuilding.

To remove this problem, the Tories have been pressing in Committee for the introduction of a "Replacement Development Certificate" to be issued in cases where the local authority cannot prove to the central government that the area occupied by the building is needed for comprehensive redevelopment or some other use such as a fire station, public library or hospital.

In the final state of affairs envisaged by the new Bill, new development of a green field site can only be carried out on land leased from a local council. So, slowly but surely, the institutions will lose all their freehold properties, both those with buildings standing on them and those as yet undeveloped.

There are some signs that the Government may be willing to give some ground by defining more exactly what is and what is not "relevant development." The Department of the Environment last week produced a consultation document on the scope of acquisition powers and duties.

INVESTMENT IN LAND AND PROPERTY (£m.)					
SECTOR	1970	1971	1972	1973	1974
Insurance companies (long term funds, net investment)	203	189	124	285	392
Pension funds* (direct)	95	93	131	291	
(via property unit trusts)	30	43	39	25	
TOTAL	328	225	294	601	

* Figures for financial years 70-71, 71-72, 72-73, 73-74

The second crucial question is the length of the leasehold which a local authority might grant. Many people in the property world have reacted quite violently to a question put to the various official bodies representing property by the Pilcher Committee (this committee is advising the Department of the Environment on matters relating to government land policy). The Committee asked whether 60-year leaseholds would be acceptable to institutional investors in property. The answer was a predictable and very emphatic "No."

The institutions would doubtless agree that a 999 year leasehold is acceptable if no freeholds are available, but even they realise that such a lengthy term is unlikely to be in the mind of Mr. John Silkin, the Minister for Planning and Local Government, who is responsible for piloting the Community Land Bill through Parliament.

The British Property Federation suggested in a memorandum to the Pilcher committee that 150 years would be the minimum acceptable term, while the Incorporated Society of Valuers and Auctioneers proposed 125 years or 99 years. We have yet to hear the Government's own thinking on this explosive topic, but it must now appreciate the strong feelings about 60 year leaseholds. The institutions say they would not invest in that kind of property and they probably mean what they say.

Compulsory purchase

The third worry is over the much enhanced powers of compulsory purchase which local authorities will enjoy under the new legislation. They will not have to specify the precise purpose for which development land is required under a compulsory purchase order. Furthermore, the Secretary of State will be empowered to disregard objections made on the ground that the acquistion was inexpedient or unnecessary. Finally, the Minister would not have to hold an inquiry into objections, although it is fair to add that the Government's powers in this field would be no greater than those they already have in the limited sphere of new town developmnet under the New Towns Act. Mr. Silkin and Mr. Crosland have both been at pains to reassure their critics that these powers will not be used in a draconian way, but their soothing words have had little impact.

Institutions and other owners of land be given, so far as anyone can tell, no grounds in law to object to a compulsory purchase order. Since land acquired in this way will be bought by local authorities at prices slightly above current use value and later at no more than current use value, land owners stand to lose heavily. This may be fair for those who have owned their land since time immemorial but for those who acquired it more recently at prices reflecting its development potential there is certainly an element of rough justice—or injustice.

It is easy enough to envisage the sort of situation that might arise. A nationalised industry pension fund, owning a number of old properties in a provincial town centre, makes a planning application in late 1974. The local authority takes 18 months to process the application (such delays are commonplace). Once granted, the planning permission is frozen under the Community Land Act and later in 1976 the same authority acquires the site compulsorily. The pension fund loses money because the compensation is paid at current use value, and loses more merely because of the delay in the agreement of compensation. To cap it all, after offering a leasehold on the site to the highest bidder, the local authority awards the scheme to another developer.

Disincentive effects

Some of the leading pension funds believe that if the worst disincentive effects of the new compulsory purchase procedures are to be avoided, the Government must accept two amendments to its CPO proposals. First, they want local authorities to be obliged to state their reasons for serving a compulsory purchase order so that some grounds for objection are provided. Secondly, they want the Government to accept "prematurity"—doing it before really necessary—as a valid ground for objection when a local authority is buying land for its "land bank." Purchases of this kind are certain under the legislation since local authorities will be required to look up to ten years ahead in planning their programmes of land acquisition. If the Government is unwilling to give ground on the three major questions, an interesting situation will arise. The institutions will be expected to live up to their word and find other areas of suitable long-term investment.

Despite the large sums available, finding such alternative investment areas may not prove too difficult. Already some institutions are showing an increased awareness of the attractions of investing in agricultural land and in forestry. The Government's policy on land is hard to reconcile with its aim of regenerating British industry through a major injection of capital.

MEN AND MATTERS

In deference to OPEC

Like the IMF, the World Bank grows steadily more obsequious towards the OPEC cartel—from which it is currently borrowing about 70 per cent. of the money it lends out. The latest example is an internal memorandum sent out to all staff on May 15, which is intended to make sure that no one visiting an oil-rich country accidentally says the wrong thing—and gets the Bank into trouble with its new benefactors.

Henceforth, all visits by Bank staff to OPEC countries (apart from at a very low level) and also all contacts with OPEC representatives, must be cleared first with the Vice-President of Finance, who is in charge of borrowing money. The memorandum speaks coyly of the Vice-President for Finance's "special responsibilities" for the OPEC countries and urges the staff to "seek his early advice on any matters in which they are involved that might affect the Bank's relationship with them."

This is not the first example of the special concern the World Bank and the IMF are both showing for the oil-rich nations. Although the Bank's latest studies show that the oil price rise has wiped out any hopes of economic growth in most of the developing world for the rest of the decade, the Bank refuses to breathe a word of criticism of OPEC.

Its chief economist, Dr. Hollis Chenery, has continually argued in public that the industrial world can afford the new OPEC oil prices—comparing them to the Marshall Aid plan after the war. And it was not until the Wall Street Journal made a fuss about conflict of interest that he was forced to resign from the Board of a family-owned natural gas company.

But none of this comes near the famous decision of both the bank and the IMF executive boards to hold this year's annual meeting at the start of September instead of the end. They have thus avoided an embarrassing clash with Ramadhan, though at the cost of transporting the world finance ministers to Washington at the stickiest time in the summer—and when, thanks to OPEC, few will feel able to afford to run the air-conditioning.

All change, no change

The annual Co-operative Congress taking place in Edinburgh has a woman president for the first time in 53 years. She is Mrs. Eva M. Dodds, who is chairman of Co-operative Retail Services, the firefighting side of the movement, which rescues societies in distress.

In her president's address to Congress she laid the usual stress on the appropriateness of a woman holding this office in International Women's Year. According to her the year "should provide an unprecedented opportunity for women and men to achieve one of the most significant social changes of our century." Mrs. Dodds then let it be known to Congress that she would prefer to be called "Mr. President."

Inconvenient

As the principal figures in the Great Bordeaux Wine Scandal this week file into court once again for the appeal hearings which follow their convictions last autumn, their counsel will no doubt take note of the simultaneous publication in France of one man's *memoirs* of the affair. Pierre Bort, who shocked the wine world when he told the trial judges last November that "everyone in Bordeaux" indulged in fraud—and received a 12-month jail sentence for his candour—has written a book detailing the way in which he masterminded the £2m. swindle. He has called it *In Vino Veritas*.

The yak trade

Four people who will not be here for the EEC referendum are the members of Britain's first trade mission to Mongolia. They will be in Ulan Bator all next week and will probably spend the big day touring a state yak farm.

Heading the mission is John Cooper of Shell, participating in the visit as deputy chairman of the East European Trade Council, which promotes our trade with Comecon, of which Mongolia is the most far-flung member. With him will be the Council's executive secretary Tony Hore, and one of the Bank of England's overseas advisers, Ron Gilchrist. Completing the team is Maureen Green, managing director of Anning Chadwick and Kiver Produce, which buys Mongolian furs, like the rare arctic leopard and yak wool, which account for most of the tiny trade between the two countries (a mere £127,000 last year).

The trade is not, so far, expanding, despite a 1973 signing, with some flourish, of the first trade agreement with both countries saying they would try to speed things up. The stagnant situation may be judged from 1972 figures of £128,000 worth of Mongolian exports to Britain, almost all hides and skins, wool and fibres, with £29,000 worth of machinery, scientific and medical equipment going out from Britain.

Can this deficit be made up and the London-Ulan Bator trade axis strengthened? None of the four on next week's mission has been there before—it will take the three men two days to fly there on Aeroflot via Helsinki, Moscow and Irkutsk, while Miss Green will arrive on the train from China where she has been at the Canton Fair.

Tony Hore says he has been flooded by inquiries from exporters attracted by the novelty of selling to Mongolia. He has, for instance, got a quotation for a mobile bone crusher which Ulan Bator specifically asked about. But he finds it hard to assess the ultimate prospects. With 1.5m. inhabitants and 25m. sheep, yaks and horses in an area six times that of Britain, the market is "rather special," he says.

However the mission should receive a fair welcome, the British ambassador there, Miles Ponsonby, having been busy fixing it all up and the Mongolians having never received such a delegation before. It would not be the right time of year to celebrate with the traditional mare's milk, which flows in July, but one thing Mongolian industry does include is a vodka factory.

Help at hand

Included among summer school courses at the University of San Francisco is something called the "Laboratory in Pastoral Ministries." What it does is use the "language of relationships" to communicate with "persons with unusual needs and life-styles, such as the sick, the ageing, broken families, communal families, alcoholics, ethnic minorities, homosexuals, stockbrokers."

Observer

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AEROSPACE

The U.K. aerospace industry goes to this week's Paris International Air Show confronted by several immediate uncertainties, including the plan for nationalisation and the forthcoming referendum on EEC membership. In the long-term, what it will need most, whatever its structure and ownership, is a clearly-defined strategy, embodying performance goals for the 1980s and beyond.

A time of uncertainty

By Michael Donne, Aerospace Correspondent

AT A TIME when the world's aerospace industries collectively are suffering from the effects of the economic recession, the U.K. aerospace industry in particular has additional uncertainties to face that, however they are resolved, are certain to result in major changes not only in its basic structure but also to some extent in its future direction.

The first of these is undoubtedly nationalisation—the Government's intention to take over British Aircraft Corporation, Hawker Siddeley Aviation, Hawker Siddeley Dynamics and Scottish Aviation, and weld them into a new organisation called the British Aerospace Corporation. The industry's leaders are unanimously opposed to this proposed State takeover, on the grounds that it is irrelevant to the problems the industry faces to-day, and that it will take up much of the time and energy of executives, and monetary resources, that ought to be devoted to dealing with the other problems looming over aerospace not only in the U.K. but throughout the world.

Even if the nationalisation Bill should be deferred because of pressure of other Parliamentary business, the threat will remain for the next session. The industry will certainly try to get the Bill amended, not only to improve the terms of compensation that are offered but also to ensure that the very wide scope that it gives to extend the possibility of State takeover to other companies in the aerospace and associated electronics, equipment and component industries is modified.

The industry's leaders regard nationalisation as irrelevant, because the Government already controls much of what the industry does. In effect, no major project of any kind can now be started in the U.K. without Government financial support. It is not clear to why the Government wants to spend such large sums on nationalisation (at least £100m. to acquire the assets), at a time when it has said it is anxious to cut down on public spending.

It is being suggested that if the Government is anxious to spend this kind of money on aerospace, it could hardly do better than spend it outright, not on compensation to shareholders, but on funding some of the new ventures the industry really needs to ensure continuity of employment and full factories in the years ahead and to maintain its competitive position world-wide.

Spare

For that kind of money, it is claimed, the industry could embark upon at least three more Concordes, build the new quiet Spey 67 engine and other quiet engines, ensure the installation of the Dash 524 version of the Rolls-Royce RB-211 engine in the Boeing 747 Jumbo jet, develop the Interceptor Version of the Multi-Role Combat Aircraft, undertake the development of the British Aircraft Corporation Series 800 or Series 700 One-Eleven short-to-medium haul jet airliners, restart the Hawker Siddeley HS-146 feeder-liner programme, keep some guided weapons programmes alive, and still leave something to spare for other ideas for the future. Collectively, these ventures add up to a major programme of activity that would ensure for the industry a clear run with full employment and good export prospects through to the 1980s, and, even more important, maintain continuity of design effort.

The second major uncertainty hanging over the U.K. industry at this time is the forthcoming referendum on membership of the European Common Market. As long-standing adherents to the principle of international collaboration, especially with Western Europe, the leaders of the U.K. aerospace industry are openly hoping for a major "Yes" vote in the referendum. Only this can ensure, they feel, that the U.K. remains in the European Economic Community and thereby retains a major voice in the decisions that will have to be taken in the immediate future on the closer co-ordination of the European aerospace industry to meet the increasing threat of competition from the U.S.

While it is clear that a "No" vote would not be likely immediately to result in the dissolution of the massive array of international collaborative ventures that the U.K. industry has undertaken with Europe over the past few years—some of them, such as Concorde and the Multi-Role Combat Aircraft, are too far down the development road for that to occur—it would be bound in the long run considerably to influence the next generation of projects that the U.K. and the European aerospace industries are anxious to undertake, as a means of keeping for themselves at least a greater proportion of the European market for civil and military aircraft that will emerge in the period ahead.

For example, the so-called "Group of Six"—British Aircraft Corporation, Hawker Siddeley Aviation, Aérospatiale, Messerschmitt-Bolkow-Blohm, Dornier and VFW-Fokker—are all collaborating on the studies for the next generation of European civil airliners, with a view to definining a specification in collaboration with the airlines that can be built on this side of the Atlantic. Without this principle of European collaboration, it is difficult to see where the future for U.K. aerospace industry lies, short of becoming an appendage to the giant U.S. aerospace industry. The U.K. is too weak to stand entirely alone—no one company, even when supported by the Government, would be capable of undertaking the kind of civil and military developments that will be necessary to keep the U.K. in the forefront of world aerospace development in the years ahead.

Although the overall objective behind the creation of a much more tightly-knit European aerospace industry is to break the dominance of the U.S. aircraft manufacturers—who last year supplied no less than 84 per cent. of the European airlines' requirements—it has to be accepted that this will be a long, tough struggle, and that there are some areas, especially in the civil field, in which the Europeans are never likely to be able to compete.

No one, for example, can really see the European industry developing a competitor to the Boeing 747 Jumbo jet in all its present and potential variants, even if it wished to do so—which it does not—while even the two medium-range tri-jets, the Lockheed TriStar and the McDonnell Douglas DC-10—have now gone so far down the road that there is no point in spending vast sums in trying to catch them up.

But there are some programmes in which the Europeans do have a chance of catching up, and even of beating the Americans. One of these is the high-density short-haul aircraft market, where a major breakthrough has already been achieved by the A-300 European Airbus. The possibilities of exploiting this situation, and developing the A-300 into a "family" of types for the future, is immense, and offers one of the most promising areas of future activity for a combined European aerospace industry with the U.K. playing a major role.

This question of closer collaboration with Western Europe leads inevitably to the problem of whether or not the U.K. industry needs some measure of rationalisation, with or without nationalisation. There seems little doubt that no matter what may happen in the light of current U.K. domestic politics, the industry, currently employing over 200,000 workers, will have to become slimmer in the period immediately ahead. World economic conditions which have severely cut back demand for all kinds of civil aircraft, and inflationary factors together with increasing complexity which have also made the costs of military aircraft so formidable as to reduce substantially the number of types on offer and the numbers of aircraft that customer governments can buy, are certain to result in intensified competition for such orders as are available in the years ahead.

Whether there will thus remain room for two U.K. civil and military airframe manufacturers without the rationalisation that State control will inevitably bring is debatable. Some in the industry believe that there will, and that if left alone the industry could settle its own reorganisation through the forces of the market place. Others perhaps more realistic, argue that so far there has not been the kind of pressure on the industry to achieve this that there ought to have been, and that, therefore some kind of enforced rationalisation is essential.

These questions are all arguable—and, indeed, have been discussed ad nauseam within the board-rooms of the industry.

From all this discussion, two things stand out. The first is that whatever is going to be done to the industry politically should be done as quickly as possible, so as to avoid any kind of damaging hiatus in which investment is at a low ebb and decision-taking is paralysed. Aerospace, perhaps more than any other industry, is working all the time at the frontiers of new scientific and technological knowledge, and as such involves a higher proportion of some of the best technological brains in this country. These people are at a premium. By virtue of their intelligence and ability they can command high salaries and better working conditions almost anywhere else in the world—especially at this time on the Continent and in the U.S., places where the bright long-term future of aerospace is still recognised despite the current slackness stemming from short-term industrial and business difficulties.

The second is that nationalisation must not be allowed by the Government to be an end in itself. There is no benefit to be gained by anyone in having a State-controlled aerospace industry with no clearly-defined programme to undertake.

Prepared

What the industry needs most to-day is a carefully prepared long-term work schedule, agreed between Government, managements and unions, that clearly charts the industry's course for the next decade or even longer, with a clearly accepted Government responsibility for financing some part of the programmes involved, both those undertaken domestically or on an internationally collaborative basis. Working out this long-term strategy will be an important task for the proposed Aerospace Corporation, if it is ever set up, and if not, for an all-industry/Government committee that will be faced with the same problems and the same task. For far too long the industry has lived without any such long-term strategy, with the result that much of its energy has been dissipated in chasing after civil and military ventures of doubtful market value. If one lesson at all can be learned from the welter of debate and uncertainty now surrounding U.K. aerospace, it ought to be this need for a much more clearly-defined policy, with well-identified long-term targets at which the industry can aim.

Many new markets for helicopters

AT A TIME when aircraft manufacturers as a whole are facing one of the toughest periods in their history, in the face of the industrial recession on both sides of the Atlantic, the helicopter builders are enjoying substantially better conditions, and look like being able to sell virtually everything they can make for some time to come.

There appear to be several reasons for this. One is that the unique capabilities of the helicopter, making it virtually the "workhorse" of world aviation, are increasingly in demand for a wide variety of tasks that either cannot be performed at all in any other way or would be more difficult and expensive to undertake with different forms of transport. These tasks range from servicing North Sea oil rigs and relieving lighthouse keepers through to agricultural aviation, such as crop dusting, and spinning power cables across remote valleys. The list of uses for the helicopter grows longer every day, and despite the wide range of machines now available on the world market there seems to be an almost insatiable demand for this ubiquitous aircraft from both civil and military users. Secondly, this same very wide range of craft on offer ensures that there is a helicopter for almost every price bracket, and although there are, by fixed-wing aircraft standards, comparatively few helicopter manufacturers—there are only four major ones in Europe, for example (Westland, Aerospatiale, Agusta of Italy and Messerschmitt-Bolkow-Blohm of West Germany)—the competition is tough and this helps to keep prices keen despite the effects of inflation.

Undeveloped

Furthermore, military requirements account for the biggest proportion of all helicopter sales, and these are really only just beginning to be met in many countries of the world, with the promise of substantial orders to come in the years immediately ahead. This expansion in military demand, when married to the civil market that is in an even more undeveloped state, appears to ensure a strong level of helicopter sales for a long time to come.

But although the outlook may be brighter than in the fixed-wing aircraft market, conditions for the helicopter manufacturers remain tough. Each and every order has to be fought for hard, with European and U.S. manufacturers all in the field. Development costs continue to rise, and the current rate of inflation in the U.K. in particular is a continual cause of concern to Westland Helicopters.

Westland Helicopters itself had a turnover of about £50m. last year, of which a substantial proportion was overseas, especially with Western Europe, with whom collaboration is strong, through the Anglo-French helicopter agreement. This is one reason why Westland as a whole is anxious to see Britain remain in the Common Market. Sir David Collins, chairman, says: "In my view it is essential to our country's future well-being that we continue to remain a full member of the EEC. It is significant that it is a group of politicians, both red and blue in colour, who delude themselves that we can achieve acceptable business terms as a small independent country. Those of us who have been intimately concerned in business negotiations in both Europe and America know perfectly well that the weak go to the wall."

It is partly the need to try to spread the burden of development costs on new projects and to widen the possible markets that, as in the fixed-wing aircraft field, most of the major helicopter manufacturers have tended to seek international collaborative arrangements. Westland and Aerospatiale, for example, whose combined helicopter divisions create the biggest helicopter manufacturing force in the Western world, have worked together for several years on the trio of helicopters to meet U.K. and French navy, army and air force and other requirements—the twin-engined Puma tactical transport aircraft (over 400 sold), the single-engined Gazelle light 5-seat helicopter and the Lynx twin-engined multi-role helicopter. These two companies have also now formed a new joint company, Heli-Europe Industries, with a view to defining new helicopter ventures for the next decade or so. This does not preclude the two companies from working on indigenous designs of their own, and Westland is currently seeking orders for its Model 606, a 13-seat civil derivative of the Lynx, while Aerospatiale is working on the Dauphin, a family of aircraft based on a basic airframe. The Westland Lynx itself is being supported substantially with orders for over 120 aircraft from the U.K. and French armed forces, with substantial further orders expected in future, despite defence spending cutbacks in both countries. Westland has also won export orders for the Lynx from the Brazilian Navy and the Netherlands Navy, and discussions are in progress with the Egyptian Government on the possibility of setting up licence-manufacture of the Lynx in that country, with up to 250 aircraft in mind.

Ageing

Westland also foresees a market in Europe for the replacement of some 2,000 ageing helicopters of the light/medium class by the 1980s, and this is one of the areas now being studied by Heli-Europe Industries.

This trend towards international collaboration has also been followed by the other two major manufacturers in Europe, Agusta of Italy and MBB of West Germany who, it was reported recently, have been holding joint talks with their Governments to define future military helicopter requirements. At this stage, it is probably going too far to suggest that all the four major helicopter manufacturers in Europe might get together to meet the needs of the future, but in view of the growing pressures from NATO for standardisation of weapon systems of all kinds, as much to ensure military efficiency as to keep costs down, some such collaboration may well eventually develop.

Already, for example, a requirement is emerging for a 20-25 seat helicopter to replace the Bell UH-1D 12-seat tactical transport helicopter, of which a substantial number were built under licence in West Germany. At present no "design competition" as such exists, since no clear requirement has yet been stated by NATO. But all the four major European helicopter manufacturers are studying the potential need, which in effect amounts to a European equivalent of the current U.S. requirement for a Utility Tactical Transport Aircraft System (UTTAS). It is possible that eventually some common design may evolve, embodying the best features from the submissions of all four companies, with all of them becoming involved in its manufacture. Several hundreds of helicopters would be needed to meet this requirement.

In the meantime, the four companies' existing designs continue to sell well. Westland in addition to its work with Aérospatiale on the Puma, Gazelle and Lynx, is continuing with its big Sea King, for which orders to date total 155, including 99 for export, of which about 130 have been delivered. With a wide range of variants, including the troop transport Commando version, Westland sees work on the Sea King continuing for some time to come, with substantial follow-on orders expected, and it has ideas for new variants in gestation. Aérospatiale, which has sold over 4,000 helicopters over the past 20 years, in addition to the Anglo-French programme, is concentrating upon the Dauphin family of types (the SA-360 with a single Astazou engine, the twin-Arriel powered SA-365 and the twin-engined SA-366), as well as on the big Super Frelon transport helicopter, and the highly-popular Alouette and Lama light helicopters. In West Germany, MBB is building on its success with the BO-105 light helicopter with bigger variants, such as the BO-106 and 107, an anti-tank helicopter, the BO-115, and the even bigger 20-25 seat BO-125. In Italy, Agusta is concentrating on its new private-venture A-109 Hirundo (Swallow) twin-engined general purpose helicopter, for which a substantial Italian military order is expected in the near future, while the company is also manufacturing under licence the Boeing Vertol CH-47 Chinook and a range of light helicopters, such as the Bell Jetranger and the Sikorsky SH-3D.

Probably the most significant fact about the European helicopter industry at this time is that whereas it was built up on the licence-production of American types, and that while these still account for a substantial volume of all European helicopter production, it is now moving out into the world market in its own right, with a widening range of indigenous designs that are highly competitive in both engineering capability and in price with the best that the U.S. industry can offer. Even if the intra-European collaborative ventures initiated to date go no further, it is already clear that the helicopter industry on this side of the Atlantic will be more than capable of holding its own in world markets.

Michael Donne

Naval version of the Westland-Aerospatiale Lynx is seen during deck landing trials on the French frigate "Tourville."

Equipment makers look to U.S. expansion

THE BRITISH aerospace equipment industry, although apparently well satisfied with the level of orders from U.K. or European co-operative ventures, continues to look towards expanding its markets and is making continually greater efforts to penetrate the U.S.

With the number of new projects in Europe now fairly limited, and the amount of purely national projects likely to decline, it is clear that alternative markets will be sought with increasing vigour. Even the Soviet Union, the world's second largest but most formidable market, is attracting attention.

At the same time, the process of rationalisation within the European industry continues, in parallel with co-operative projects which have in general proved successful despite criticism that they lead to duplication and inefficiency. But a negative result of the U.K. referendum on membership could halt the integration in Europe, although it will probably not induce companies with interests in France or Germany to get rid of them.

Similarly, the Government's nationalisation plans are thought unlikely to have very great effects on producers of equipment, as much of their work is connected with Government anyway, and in fact may make their job easier in having to deal with one corporation instead of two or more. But the industry also believes it will lead to contraction of work.

Sights

Looking at the various alternative markets, the U.S. is the obvious target which most companies have in their sights and Lucas Aerospace, the country's biggest producer of built-in equipment estimates exports there to be running at £13.5m. a year, mainly connected with the RB-211 engine, compared to turnover of £60m. a year. Work in Europe runs at around £4m. a year, the rest of the world £1m. and the remainder within the U.K.

Recent successes by the company include contracts for Boeing 747 flap mechanisms and equipment for de Havilland Canada's Buffalo. But perhaps more significant is the exchange of technology agreement made with the Soviet Union, which means that if Lucas cannot sell its equipment to the Russians, it can at least make some profit out of its technology. It has already supplied a generating system, developed first for the Hawker Siddeley Nimrod for the TU144.

Total aircraft equipment turnover in Western Europe is now reckoned to be running at more than £500m. a year, with Britain's share estimated to be about 45 per cent. or more than £200m. a year. In 1970-71, the U.K. was followed by France with 28 per cent. (£130m.), Germany 11 per cent. (£51m.) and Italy 10 per cent. (£47m.). The remaining 7.5 per cent. was shared by Sweden, Spain and the Netherlands.

Unlocked

Against that, Lucas' £2m. a year business with the Soviet Union over a period of five years may seem insignificant, but there is no doubt that if the market can be unlocked, there are great rewards to be won. Co-operation will be across the board, although the Russians are known to have a requirement for electronic engine controls and digital control, which has been proved to be operationally successful in the Tri-Star.

Another area of development which Lucas believes to be promising in all markets is new combustion techniques, one of which is the burning of fuel at higher temperatures to improve efficiency and reduce pollution. Work has also been carried out on a hydrogen combustion system and successful tests carried out so that the company can be ready if the need arises for an alternative fuel to be used.

These developments will be shown in Paris, where there will no doubt be considerable evidence of the company's push into France through its subsidiary Thomson Lucas which has concentrated on the manufacture of electrical generating equipment. It is known that further acquisitions are planned there and in Germany and Italy, although this would be hindered by a "no" vote in the referendum.

Dowty, with 95 per cent. of the U.K. landing gear market, remains pleased with the level of work on hand which has been given a boost by the go ahead for the Sea Harrier, for which it will supply landing gear, a fuel system for the Pegasus engine, hydraulic and electrical equipment. Other work in progress is for Jaguar, Harrier and the HS-748.

The chairman of the group, Sir George Dowty said recently that there had been steady growth in the company's aircraft business with orders towards the end of last year at the highest level on record having increased during the year by 22 per cent. Direct exports and overseas business represented around 40 per cent. of the total and the order book was roughly balanced between the western world's military and civil aircraft requirements.

It was felt that the European military programmes, including Jaguar and the MRCA, would provide work for several years, with the timing for full-scale production for the latter coinciding with the end of the Jaguar programme. Output of the company's ram air turbines for emergency power has continued to grow and a manufacturing licence has been granted in the U.S.

Plessey too has had recent success in the United States.

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The aero-engine manufacturers

PROBABLY THE two most important problems facing Rolls-Royce (1971) to-day, as one of the world's three biggest aero-engine manufacturers, are first, the need to stem the tide of U.K. inflation, which, if it continues at its present rate, must seriously threaten to price the company's products out of world markets, and secondly, the need to establish firmly at an early date some of the major new programmes upon which the company will depend for perhaps the next 20 years or more.

Precisely the same problems can be said to face the airframe manufacturers, who also have yet to surmount the threat of nationalisation (something Rolls-Royce perforce overcame four years ago, when the former Rolls-Royce Limited collapsed), but for the engine manufacturer they are particularly significant at this time. This is not only because of the rapidly intensifying competition in world aero-engine markets, as economic conditions worsen and airlines and military authorities reduce their spending on new aircraft types, but also because the cost of new engine development itself is escalating at rapid rate.

Tough

Rolls-Royce is in a particularly tough market. It faces some of the most intense competition in the world, from Pratt and Whitney and General Electric of the U.S. Few outside the aero-engine business really realise just how relentless this competition is, and how unending is the demand for cash if the company is to keep up with the "big-league" in aero-engine development, through the rest of this decade and into the 1980s and 1990s. It is significant that in recent months both the major U.S. aero-engine companies have launched extensive cost-cutting programmes throughout their entire operations, so as to be able to spread limited available cash across an ever-broadening spectrum of demand for new civil and military engines. Rolls-Royce must follow this course, if it wishes to keep abreast of a technology that is developing at an accelerating rate, not only under the stimulus of anticipated future demand both for bigger-thrust engines for bigger aircraft and engines in new power brackets hardly as yet explored, but also because of the pressures of other factors, such as the increasing demand for much greater quietness along with substantially improved fuel consumption. In fact, the whole pattern of aero-engine technology is changing fast, and in order to keep abreast Rolls-Royce must not only be price-competitive world-wide, but also to some extent be one jump or more ahead of the competition.

These twin tasks offer the company a most challenging period of activity in the immediate future.

The company, like the rest of the U.K. aerospace industry, is substantially dependent upon the U.K. Government for development and production finance. The Government, apart from the money it intends to spend on nationalisation of the airframe manufacturers, already spends substantially in aerospace for a wide range of civil and military aircraft, engine and missile programmes, and is reluctant to allocate more at a time of acute pressures on central government spending of all kinds.

Yet now is just the time that a wide range of new ventures are coming forward for development funds, and this is especially true of the aero-engine field. One major example is the need for additional funding to help put the Dash 524 version of the RB-211 engine into the Boeing 747 Jumbo jet, and thus open a major new market for this high-thrust engine in the years ahead, in addition to the market that already exists for it in the later models of the Lockheed TriStar. So far, the Government, while helping to fund the development and production of the Dash 524 for the TriStar, has been reluctant to put this additional cash—estimated at about £15m.—into the development of the 524 for the Jumbo until an additional order for it is won beyond that promised from British Airways. Both Rolls-Royce and Boeing have pointed out that the order is most likely to come if the development is undertaken anyway. Currently, Boeing has continued with its own work on this venture, but has made it clear that if no U.K. Government support is forthcoming by May 30, when the agreement with Rolls-Royce is due to expire, it will discontinue that work and allow the agreement to lapse. Thus, a major opportunity for the U.K. to acquire a big new market for one of its most promising engines—indeed, its only engine capable of keeping it in the civil "big-engine" field—will lapse.

Immense

This may not seem to be a particularly tragic situation to some in Whitehall or elsewhere in the country, but the long-term consequences of it to Rolls-Royce and the U.K. aerospace industry could be immense. For there is little doubt that the Boeing 747 Jumbo jet is now in a class by itself. No other aircraft manufacturer in the world, including in the Soviet Union, is building any aircraft capable of matching it, and the line of derivatives that Boeing is planning will carry production through to the end of this century. By putting the Dash 524 into the existing Jumbo models as an alternative to the existing Pratt and Whitney JT9D and General Electric CF6 Series, Rolls-Royce would be gaining a foothold in this market, with all that this could mean in stimulating further development of the Dash 524 RB-211 to higher powers in the future as the Jumbo jet itself expands in size to 750 and then 1,000-seaters.

There are other areas where new development cash is needed, however. Rolls-Royce has plans, for example, for a new version of its famous Spey engine, the Dash 67 Mark 606, that could find a role in such prospective new aircraft programmes as the British Aircraft Corporation's Series 700 One-Eleven. Derived from the existing Spey engine, the Dash 67 Mark 606 makes use of the recent advances in technology which have been developed for later versions of the RB-211 and other Rolls-Royce engines. It is a quiet engine, which will enable operators to achieve the steady reduction in noise levels throughout the 1980s that will result from continued environmental pressures.

This whole question of providing new ultra-quiet engines for the future is also being explored by Rolls-Royce through its partnership with Snecma of France and Dowty Rotol, based on the M-43H engine and the Dowty Rotol variable-pitch fan. The U.K. Government is already helping to fund this venture, and the demonstrator engine, designated the RB-410 D-2, started a 150-hours bench-test programme this April. Derivatives of this engine, giving up to 18,000 lbs of thrust, are envisaged for ultra-quiet Reduced/Short Take-Off and Landing (RSTOL) aircraft carrying between 60 and 160 passengers, envisaged for the 1980s and beyond. It is imperative, therefore, that this programme should not only be continued, but also expanded as much as possible, in the light of the fact that the whole question of making air transport quieter starts with making quieter engines, rather than on spending increasing sums on make-shift panaceas with existing engines, such as developing "hush-kits" for retrofitting to those engines — important as those programmes may be in the interim period.

Pollution

Rolls-Royce has also launched a new twin-spool turbo-fan engine in the 5,000 lbs thrust class, designed primarily to meet the future requirements of the medium-size business jet market. Offering a level of economy approaching that of to-day's large commercial aircraft fan engines, this design is funded as a private venture by Rolls-Royce, and the first engine is expected to run before the end of this year. The design has been tailored around all the existing and anticipated legislation in the areas of noise and pollution, and it will have a specific fuel consumption some 40 per cent. lower than that of the engines which power the majority of the first-generation business jets, thereby meeting the other major criteria for future engine development — fuel efficiency. This engine will be capable of providing business jets of the Hawker Siddeley HS-125 and Dassault Falcon 20 type, for example, with a non-stop coast-to-coast capability in the U.S., and also offer a transatlantic capability for a small tri-jet business aircraft. Both commercial and military roles are envisaged for the engine, including transports, trainers, light strike aircraft, and perhaps also the Remotely-Piloted Vehicle (RPV) market. Eventually, it is likely that Rolls-Royce will have to seek quantity production funding from the U.K. Government.

Another major area of concern for Rolls-Royce must now be the so-called "10 to 15 tons thrust" engine market—producing an engine of around 22,000 lbs of thrust that will be capable of matching the present rivals in this field, the French Snecma/U.S. General Electric CFM-56 and the U.S. Pratt and Whitney JT-10D. This kind of engine is likely to be much in demand in the later 1970s and 1980s for high-density, short-medium haul airliners carrying up to about 200 passengers. British Aircraft Corporation, for example, is thinking in terms of using two CFM-56s in its proposed Series 800 One-Eleven derivative, a 144-161 seat aeroplane for which a big market is foreseen.

It is probable that over the next 10 to 15 years, up to 1990, a market will emerge for upwards of 1,000 aeroplanes in this broad high-density, short-medium haul category, creating a market for upwards of 3,000 engines including spares. The new engines will be needed because these aeroplanes will have to operate in a totally new environment — they will have to be much quieter than anything seen before, taking account not only of existing anti-noise legislation but also of anticipated further legislation that will be even more stringent than in the past, and they will also have to be much less "thirsty" than any previous generations of engines. This is why the manufacturers have been looking beyond merely adapting existing types, to designing entirely new engines.

So far, Rolls-Royce has not got into this market with a firm development and production programme, although its major competitors are now pushing on hard down the road with the CFM-56 and the JT-10D. While it is known that Rolls-Royce has been discussing the possibilities of collaboration with Pratt and Whitney and General Electric, nothing firm has so far emerged —although it is possible that something may be said at the forthcoming Paris International Air Show. It is not a market Rolls-Royce can afford to miss, however, nor is it a market that is going to wait. Because of the heavy development and production costs of any new engine, it is likely that both the rival programmes would appreciate some contributions in cash and kind from Rolls-Royce, with perhaps the emphasis more in favour of Pratt and Whitney than the GE and Snecma partnership. It is probably still not too late for Rolls-Royce to get some share of the production programme, if not the actual development, in either engine. In return, it has much to offer in the way of technology of its own in other areas.

Expensive

What all this amounts to is that while Rolls-Royce has a large number of existing major programmes, both of its own and in collaboration with engine manufacturers in the U.S. and overseas, it still faces a number of areas in which big—and expensive—developments will have to be undertaken if the company is to remain in the "big-league" of world aero-engine builders. The aero-engine business is never static —development is continuing all the time. But it is an expensive business—probably one of the most expensive in the world, with any new engine costing £300m. or more to develop. But the rewards for success are equally as great. Engine spares business for the U.K., stemming from engines first designed many years ago, such as Dart turbo-props and Avon turbo-jets, is now bringing the U.K. more than £280m. a year in export business alone, and is one of the mainstays of the entire aerospace export performance and a major contributor to the balance of payments. Money spent on developing any kind of aero-engine now is likely to produce returns for more than 20 years ahead, and should be undertaken without unnecessary penny-pinching or quibbling. Aero-engine technology is in effect the spearhead of aviation technology, for the availability of engines often determines what the aeroplane designer himself will or even can do. Since aviation technology is universally recognised to be in the forefront of all technology, often working at the very frontiers of new knowledge in such areas as high-temperature materials, for example, it follows that aero-engine manufacture is a business that should have a major claim on the resources that are available for aerospace.

Michael Donne

Equipment

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winning orders for equipment for the Boeing 747 and for the Douglas DC-10 and its display in Paris will include a diverse range of products such as mechanical, electrical and hydraulic equipment. Examples of its wide range of technology manufactured by Plessey Aerospace are a new rocket motor, integrated drive aircraft electrical generation systems and a helicopter stability augmentation system which is fluidically controlled.

Plessey Power Systems will show its airfield lighting systems, a type of equipment for which there has been increased demand and for which even more is predicted. Complete systems have been supplied to customers in the Middle East and many countries in Africa as well as for U.K. airports. It is felt that the bulk of future sales will be for export. Plessey Precision-Diac will show examples of machining, using both conventional and numerically controlled equipment, of steel aluminium alloys and titanium.

Components produced by the company range from miniature fixtures used in detail fitting, to large jigs for the construction of wide body aircraft fuselages. Diac also manufactures MRCA airframe components for Messerschmitt-Bolkow-Blohm of Germany.

American companies, eager to participate in the continuing development of the European industry, are expected to be well represented in Paris as it is clear that they too are in need of new markets outside their own country. Moreover, the organisation of their industry means they will for some years ahead maintain an advantage over European competitors suffering from fragmentation.

The role of the British industry is now blurred by two factors, the referendum and nationalisation of the major airframe companies. The equipment industry believes it will be some considerable time before it is seriously affected by the latter of these difficulties.

But the industry's attitude is perhaps best summed up by Sir John Clark, chairman of Plessey, who said recently that the Industry Bill did not seek to build on existing institutions or develop them more effectively, but sought to impose statutory obligations on industrialists with no comparable reform from the trade unions. Such a one-sided approach would not give the transfusion of life-blood that industry as a whole needed so urgently.

Lorne Barling

European space developments

WITH THE long-awaited establishment of the European Space Agency (ESA) now a fact—subject only to the signing of the necessary international convention later this week—the past fragmentation of European space affairs is now hopefully at an end, and a new period of concentration of money, scientific manpower and resources is about to get under way. The new ESA is taking over the existing European Space Research Organisation (ESRO), which for many years has been the principal agency engaged in the development of scientific and applications-technology satellites, and the rump of the European Launcher Development Organisation (ELDO), originally set up to undertake the development of the now-defunct Europa satellite-launching rocket.

Launch

The ESA, therefore, starts its life with an ongoing series of programmes of considerable significance. These include the development of the Spacelab manned earth-orbiting workshop (which is intended to be an integral part of the American Space Shuttle reusable space transport system); the Ariane rocket launch vehicle that is intended to succeed the Europa series and provide Europe with its own "insurance" means of putting satellites into orbit should the U.S. ever for any reason deny Europe access to the Space Shuttle; and a wide variety of applications-technology satellites that includes the Marots maritime communications satellite: the Aerosat (in collaboration with the U.S. and Canada) for communications between aircraft and the ground; the Meteosat, for recording and transmission of data for more accurate weather forecasting; and the Orbital Test Satellite (OTS) for experimental and pre-operational telecommunications and data transmission.

In addition, the ESA will have an extensive programme on scientific satellites, including the GEOS for the study of the magnetosphere from mid-1976; the International Ultra-violet Explorer (IUE), a joint ESA/U.K./U.S. project to provide an orbiting ultra-violet astronomy observatory for international use from 1976: the International Magnetospheric Explorer (IME), one of a pair of satellites (of which the U.S. National Aeronautics and Space Administration is developing the other) for studies of the magnetosphere from 1977; and the Exosat X-ray astronomy satellite, due for launch in 1979.

The broad principle under which the ESA will work is that the member-countries (France, Germany, U.K., Italy, Belgium, Sweden, Holland, Switzerland, Spain and Denmark) will collectively subscribe about £140m. a year for space activities. While each country will have the right to continue with its existing indigenous programmes (the U.K. *will not*, for example, put its military Skynet defence communications satellites into the ESA), it will be obliged under the convention to offer any new space ideas it may have to the ESA, with a view to them being adopted as international collaborative ventures in Europe. If the other ESA members decide to adopt those programmes, they would automatically come under ESA jurisdiction and responsibility. Should no other ESA member want to participate, however, the country originating the ideas would be free to pursue them alone if it wished.

Effectively, what the establishment of the ESA means is that the whole of Europe's space effort now gains a new sense of cohesion and direction that has been substantially lacking hitherto, notwithstanding the efforts made by ESRO itself over the past few years. It provides a unified voice with which Europe's Governments and space scientists can speak and a single central agency to deal with the vast array of commercial and industrial companies operating in the space and related fields. It will enable Europe to speak on level terms with the NASA in the U.S., and in the longer-term will also provide the focal point of employment for space-scientists that has so far been substantially lacking.

Some of the immediate areas of activity for the new ESA have already been outlined by Mr. Roy Gibson, the director-general. He said in Brussels recently that there ought to be a continuing rationalisation of European space programmes and facilities, so as to reduce duplication and to ensure for Europe as a whole "more space per accounting unit"—better value for money. There is little doubt that over the past few years there has been a proliferation of companies seeking some part of the potential revenues from space activities. Some have dropped out of the race of their own accord, having discovered that the technical standards are exceptionally high, and that there is no possibility whatsoever of rapid profits, although in the longer-term much of the knowledge gained from work in space may be applicable as "spin-off" in other directions.

Efforts

Secondly, as part of the overall rationalisation of European space efforts that must follow the establishment of the ESA, there will have to be a coherent industrial space policy, and member-governments will have to accept that some of their present industrial companies participating in space will have to drop out. On the budgets that the ESA will have provided for it by member-states, it will not be possible for every company working in space to get an adequate share of the cake, and it will be better in the long run if governments and companies recognise that a smaller number of highly-skilled companies working in the field will be better than a large number of less-skilled organisations fighting for a few crumbs of comfort in the way of space contracts.

As a corollary to this, however, there is little doubt that the ESA foresees the day when applications-satellites, initially devised by ESRO or the ESA, come forward as marketable commercial systems world-wide. Just how far it will be part of the ESA's task to help those industrial companies to win contracts for the supply of systems world-wide still has to be worked out. Indeed, there is also the question whether the ESA itself should even become the owner and/or manager of operational satellite systems (for example in telecommunications or weather forecasting) derived from satellite concepts devised and developed by itself.

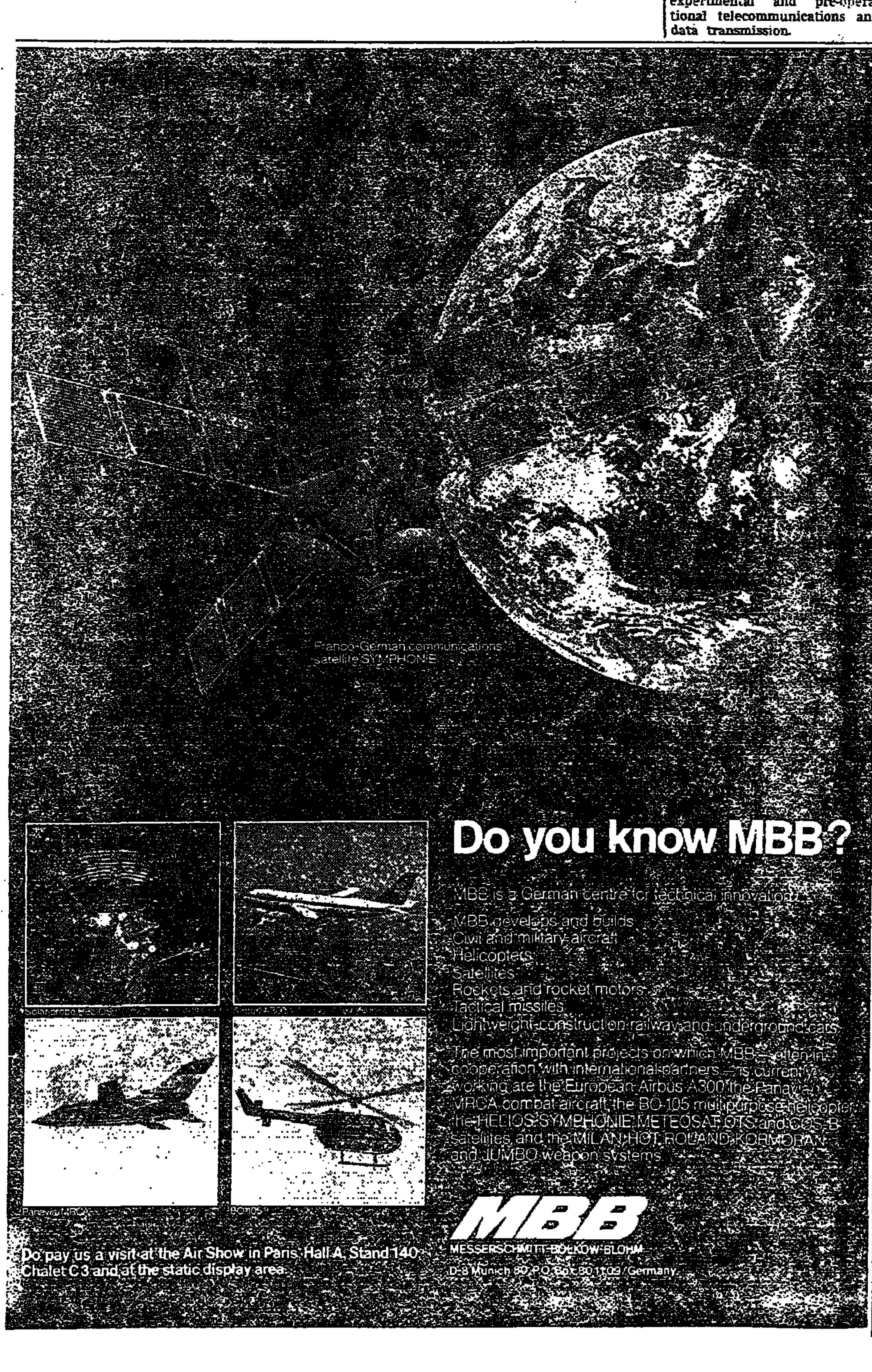
Already, for example, efforts are being made by many countries with substantial merchant shipping fleets to establish through the Inter-Governmental Maritime Consultative Organisation (IMCO) some kind of organisation to own and manage maritime communications satellites. A conference on this subject was recently held in London, but did not achieve final results, and it is likely that a substantial amount of work will still have to be done before any "Inmarsat" organisation finally emerges. But in addition to maritime communication satellites, there are plans for more weather satellites (the Meteosat), and for aeronautical communications satellites (Aerosat) and perhaps also eventually various regional telecommunications satellites (Regiosats). Each of these is likely to need some kind of international organisation to run it and in particular to collect revenues. What has to be established is whether the ESA, as the research and development organisation, should also become involved in managing such operational satellite systems.

Another point stemming from this is that the ESA may well become a useful vehicle whereby the member-states can voice their views on future satellite activities in the international forums that either already exist or are likely to be set up in the future—Intelsat, Inmarsat and so on. At present — and the recent Inmarsat conference in London was a case in point—the various member-States of the ESA all send delegations to the various international conferences and express their views, involving the expenditure of immense time and effort. It might be more economic in both time, money and resources if the member-States of the ESA were to conduct their discussions on such matters through the medium of the ESA itself in advance, and then send the ESA itself to the conferences with a specific mandate on what member-states want to see achieved. Such a devolution of authority from individual countries' civil services or bureaucratic procedures to the more knowledgeable and practical staffs of the ESA might cut down substantially the time it takes to get new international space organisations and ventures off the ground in future, and make European space activities more competitive.

Struggles

Beyond all this, the creation of the ESA ensures that existing space programmes in Europe, often only initiated after immense domestic political struggles, will not be merely ends in themselves. Probably the most valuable effect the ESA will have is that of creating continuity in European space efforts, and putting an end to the "stop-go" situation that has plagued so many of the specific ventures conducted in individual countries in the past 20 years, and which has resulted in such a waste of money and scientific and technical resources. Concentration, cohesion and continuity, it is to be hoped, will now replace past fragmentation, dissipation and disillusion where European space is concerned.

Michael Donne



Electronics and avionics

WITH British avionics manufacturers now becoming more aware of the possible implications of a nationalised airframe industry, many feel that too little has been done in the past to make more impact as a successful and independent industry.

The high proportion of avionics equipment in an aircraft—often more than a third in value—makes it an important consideration, certainly equal now to that of engines, which tend to get considerably more political attention.

Furthermore, it is sometimes forgotten that the ability to supply avionics for new aircraft programmes all over the world has far-reaching advantages. First it enables technological leadership to be maintained against the challenge of international competition, a vital factor in enabling the country to serve its own aircraft industry and for its defence. Secondly, it is a valuable source of export business in an important technological field.

The world avionics business could exceed £10bn by 1980 and the United States still dominates the market with around 85 per cent. of business, but British companies have held their own in recent years and continue to win some of the most sought-after contracts.

These contracts are increasingly valuable as modern aircraft depend more and more on avionics and are manufactured in greater quantity to reduce unit cost. Among the most urgent defence requirements, a number can be readily identified, the first being fly-by-wire systems. These continuously control the relationship between the pilot's control column movement and the resulting manoeuvre by means of digital computers and data transmission to provide safe and stable handling qualities for advanced-performance aircraft.

Second, Marconi-Elliott Avionics contends, is the need for helicopter avionics which must be lightweight, reliable and easy to maintain and carry out an increasing variety of functions which include advanced flight control, tactical communications and homing and more accurate instrumentation for operation under adverse conditions.

Maritime aircraft systems, for long-range maritime patrol aircraft and helicopters, are seen as a rapidly developing market while there will certainly be a long-term need for navigation, weapon aiming and display systems for all-weather strike and 24-hour interception operations.

Advances

Significantly, technological advances such as fly-by-wire have considerable influence on the design of airframes, leading to earlier and more extensive co-operation between various contractors on programmes such as the Multi Role Combat Aircraft. This trend is likely to continue, although avionics manufacturers are wary about being drawn too far from other sections of the electronics industry towards the airframe and engine manufacturers.

But in the longer term, whether the airframe industry in the U.K. loses or benefits from nationalisation, and whether the U.K. remains in the EEC or not, collaboration appears to be the only rational course if the often massive development costs of aircraft are to be recovered and any profit made. That is perhaps best illustrated by the fact that the U.K., with the largest single aerospace industry in Western Europe, currently has no major civil aviation venture of its own.

The avionics industry, firmly based on the larger electronics industry and experienced in working with aircraft manufacturers world-wide, also finds itself drawn between commitments in the United States and in Europe. At the moment it is not unusual for one supplier to have equipment in two competing aircraft, and many manufacturers regard this as healthy competition which they would wish to continue.

But a number of companies have achieved a wide spread of customers, such as Marconi Elliott, which supplies almost all major aircraft manufacturers, operators and defence agencies in Europe and the U.S. It has systems currently operating in more than 100 different aircraft types.

Among the U.K. industry's major successes which will be seen at the Paris Air Show is Ferranti's Seaspray radar for the British naval version of the Lynx helicopter and the Maritime Harrier, and its MRCA equipment, the digital inertial navigator, combined radar and map display (with AEG as sub-contractor) and for the laser ranger and marked target seeker. It is opportune that production go-ahead for the Seaspray has been given recenty.

Smiths Industries will show its range of electronic head-up display systems chosen for MRCA, Jaguar and other aircraft, and other equipment such as radar altimeters, fuel gauging and flight control systems, instruments and accessories used by more than 450 airlines and air forces.

Plessey Navaids, which since its formation just over a year ago has won orders approaching £10m., nearly all for export, will stress in its presentation in Paris its ability to provide con-

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The Concorde 01, seen at Nairobi recently during the flight-test programme.

Airlines' fortunes at a low ebb

OVER THE past year and a half, the world's airline industry has been passing through its worst economic crisis ever. The reductions in seating-capacity made during the winter of 1973-74 directly as a result of the Arab oil embargo have been maintained and even extended subsequently as a result of the declines in traffic stemming from the industrial recession in the main air transport generating centres of Western Europe and North America. At the same time, fares have been raised extensively in order to meet not only soaring fuel bills—now generally three times what they were in the autumn of 1973—but also other inflationary trends. These increases in turn have helped to depress traffic, with the result that the airline industry's collective economic fortunes are now at an extremely low ebb.

It would be pleasant to be able to bring some ray of hope into this gloomy situation, but this is impossible. While in some parts of the world it is possible to find airlines and routes where traffic is comparatively buoyant—and this is especially the case on some long-haul routes, for example, between Europe and the Far East and South America—in others, such as Western Europe and the U.S., the situation in the first quarter of this year was one of either zero growth or even of a decline in traffic volumes, and worsening financial results.

Cheap

For the longer-term, no one in the world air transport industry seriously doubts that better times will eventually emerge, and that once the world's economic situation in general improves, the fortunes of the airlines will move up with it. That there is still a significant demand for travel is continually demonstrated by the success of cheap holiday and other fares plans, and it seems clear that if the airlines can develop these schemes in the years ahead they will be able to reach markets that have hitherto been closed to them.

But even with such renewed expansion, however, it seems clear that the rates of passenger traffic growth enjoyed by the airlines in the boom years of the 1960's, sometimes averaging as much as 12 to 15 per cent. a year, have gone for ever, and that a much lower rate of about 5 to 8 per cent. at most can be expected. In itself, this is hardly a disaster, for many other industries have existed profitably for many years on annual expansion rates of even less than this, and have regarded themselves as fortunate. The airline industry will have to readjust its thinking to cope with this situation, but there is no reason to assume that it will not be able to do so.

It is the immediate future that gives most cause for concern, however, with virtually every major airline in the world either reporting substantial losses or at best considerably reduced profits, despite revenues boosted by dearer fares. The actions already taken by the industry to correct this situation can be expected to be intensified in the remaining months of this year. They include further reductions in seating capacities offered, either by additional "capacity agreements" between competing airlines on specific routes, such as the North Atlantic, or by "route swapping" arrangements such as that recently concluded by Pan American and Trans World Airlines. Many of the older types of jet airliner are being phased out, not only because they are "thirsty" in to-day's climate of fuel restrictions and high fuel costs, but also because in an increasingly environmentally conscious age they are noisy and pollutant, and are thus becoming increasingly unacceptable to communities who live round airports. Also, they are becoming redundant anyway as the new generation of "wide-bodied" jet airliners with bigger seating capacities such as the Boeing 747, Lockheed TriStar and McDonnell Douglas DC-10 and the European Airbus move into service. Many of these older jets are finding their way down through the air transport system to the smaller, developing airlines in countries which have hitherto been largely without jet services, and to that extent they are helping to lift air transport in those areas on to a higher plateau of comfort and convience compared with the even older piston and turbo-propeller driven airliners customarily used there. But the market could become saturated and some of the older jets are likely to be broken up, because they are now aproaching 20 years of age, and would be prohibitively expensive to modify in order to improve their fatigue lives and reduce their noise.

Apart from these directly tangible efforts to improve their economic situation, the airlines are undertaking a wide variety of other measures. These range from reductions in staff numbers, the freezing on recruiting, severe cuts in spending in all directions—not least in the number of new airliners they are buying, with inevitably severe effects upon the aircraft manufacturers themselves—increased emphasis on the other areas of activity, such as cargo, which have been long neglected in favour of passenger development, and substantially more competitive and vigorous advertising schemes. The industry has already become leaner and tougher than it was eighteen months ago, but it still has a long way to go, and can be expected to continue with all these measures through 1975 and well into 1976.

There are other areas, too, which so far have only been explored by the industry in a comparatively limited way, but which will have to be considered in much greater detail if the airlines are to achieve any lasting improvement in their economic health. One of these is the principal of international collaboration, combining into groups not only for the procurement of common types of airliners but also for their engineering maintenance. This is already well evidenced by the existence of two major groups on the Continent, the Atlas group that includes Air France, Alitalia, Sabena and Lufthansa, and the KSSU group which includes KLM of Holland Scandinavian Airlines System, Swissair and Union de Transports Aériens. So far, neither of these groups has gone as far as the original idea of "Air Union"—a complete integration of operations—first mooted several years ago and there is no evidence that they will ever do so, since nationalistic aspirations will probably always preclude the complete submergence of individual identities into a bigger international airline conglomeration. But, so far as they go, these groups have helped to save their member-airlines substantial sums of money on equipment procurement and maintenance and promise to continue doing so.

Both Atlas and KSSU, however, have also led the way towards a clearer identification at an early stage of airline requirements for new transport aircraft—the Atlas group's interest in the European Airbus is an example. Although this trend has not yet reached the stage where the airlines themselves collectively formulate their specifications at an early stage and then pass them to the manufacturer to turn into an aeroplane, that situation may not be so far away. Most of the major airlines in Europe, including British Airways, have already had informal discussions on their likely aircraft requirements for the 1980s and beyond, both among themselves and with the aircraft manufacturers, and it is possible that within Europe a suitable specification may yet emerge that can be converted into an aircraft by a consortium of European aircraft manufacturers, so as to break at least in one sphere—that of short to medium-range, high-density operations — the dominance of the U.S. manufacturers. What does seem clear is that the current U.S. dominance in other areas—the long-haul high-density Boeing 747 Jumbo jet, and the medium to long-haul high-density trijets such as the TriStar and DC-10 —is unbreakable.

Liaison

It is difficult to see how any consortium of European manufacturers, even supported with substantial Government funds and strong European airline interests, could ever expect to catch up with those aircraft. But the basis for a family of short to medium-haul high-density aircraft does exist in the European Airbus, which ought to be exploited and developed vigorously. This can only be done, however, with the full support and encouragement of the airlines, so that one of the major requirements for the future in Western Europe must be a much closer liaison between the airline industry and the aircraft manufacturing industry from the very earliest stages of conception of new civil aircraft ventures. Such a development could only be beneficial to all involved in the aerospace and aviation community.

The whole question of inter-airline co-operation world-wide must also be closely examined, so as to ensure that some of the current abuses and debilitating practices that cost the industry millions of pounds a year are discontinued. Breaches of fares regulations through rebates and discounts have been a cause of concern to many airlines for a long time, but there are now welcome signs that the industry, through its trade association, the International Air Transport Association, is seeking to put a stop to this.

Another sign of the industry's recognition of the need for closer collaboration is evidenced by the growth of new associations. One good example is the Arab Air Carriers' Association, which links together all the major airlines of the Arab world, and which is now increasingly speaking with a co-ordinated voice on Arab airline aspirations and requirements, especially on such matters as fares, routes and equipment procurement. It will probably never be possible to achieve agreement in the world airline industry on all that needs to be done to improve the collective economic situation of the industry, not only because there are so many different airlines but also because of the wide disparity of national attitudes they represent.

This wide diversity of views among governments, political, social and economic, causes the world airline industry some considerable problems, and one of the points made strongly by the IATA itself in recent years is the need for governments to agree more frequently among themselves on the regulation of the industry. For without a coherent pattern of government control it is impossible to expect the airline industry to achieve the improvements in the quality of service and economic health that are required.

Fuel bill

One final aspect of this need for governments to devote more attention to the requirements of civil aviation is evidenced in the fuel price situation. Fuel costs now generally account for about 24 per cent. of total airlines' operating expenses, and even as much as 30 per cent. for some airlines, against 11 per cent. in 1972-73, and the additional fuel bill that carriers have had to absorb is $2,192m. in 1974-75, rising to $2,857m. by the end of 1976. At present, some governments control the price of fuel for consumption within their own states—such as for cars—but the prices for fuel for public-service aviation at international airports, although only representing 4.5 per cent. of total consumption, have been largely ignored. This has encouraged some fuel suppliers to seek to compensate for profit restrictions elsewhere by putting up the price of aviation fuel. The airline-members of the International Air Transport Association, therefore, have called for tighter government measures to prevent this, and have pointed out that total fuel costs to the airlines could be reduced considerably if all governments observed the policies recommended by the International Civil Aviation Organisation and ensured that fuel and lubricants for use on international flights were supplied free of customs duties and other taxes. The airlines feel strongly that while they have been undertaking a wide range of fuel conservation measures themselves, saving millions of gallons a year, governments have done little to help.

Michael Donne

Electronics

CONTINUED FROM PREVIOUS PAGE

-plete airport equipment as a package deal.

The company, contractor for the British Government to develop as a joint venture a system proposed by the U.K. to meet ICAO requirements for an acceptable Microwave Landing System, has completed a prototype which will be on show in Paris.

The Sperry Rand Corporation will display computers widely used by airlines and for the worldwide communications network for airlines, automatic flight control systems and a wide range of its products.

The showpiece of Marconi-Elliott's products will be the newly developed PERI-HUD, being seen in public for the first time. This has been designed in response to the problem with many types of aircraft which lack the instrument panel space needed to instal the conventional HUD. This has been overcome by mounting the display unit on top of the instrument panel and using periscope optics to give an uninterrupted view to the pilot.

Another new development is the helmet-mounted sight, a head-up display in miniature, which is effective over a wide range of head movements. In additions, threat warning information can be displayed immediately to the pilot regardless of where he is looking.

Last but not least, Marconi will show its improved automatic throttle control system for the Boeing 747, ordered by the company and now under development. The system will automatically control airspeed and other parameters to reduce pilot workload, particularly during descent, holding, approach and landing phases of flight. Once the development is completed, it will become part of standard automatic flight control installations on newly built 747s.

The system has a number of advanced optional features in meeting with current and anticipated airline requirements. These include the ability, with minor modifications, to compensate for engine dynamic differences, to work in conjunction with advanced engine protection systems, such as total air temperature-engine pressure ratio systems.

Jointly

Returning to the U.K., one of the more interesting developments almost coinciding with the show is the formation of Flight Navigation, a new company owned jointly by Decca and Smiths Industries. The aim is to use the experience and expertise of the two companies to support the development and production of aircraft systems combining automatic control, navigation and display technologies.

It is apparent that the company covers all the disciplines needed for success in this area including aerodynamic thrust control, navigation aids, display systems and the human factors concerned with the pilot-machine interface. The company has recently been awarded two important contracts in this area. One is for the Ministry of Defence in support of the Royal Aircraft Establishment's flight systems division and the other to assist the CAA to determine the effects of improved air and ground navigation aids of the flight path performance of transport aircraft.

The new company is seen as an attempt to harness the resources of the two parents to produce advanced and cost effective systems which will find favour with both civil and military aircraft operators both in the U.K. and abroad.

Lorne Barling

Private aircraft business picks up

THE OPERATION of business aircraft has in the past year come under considerable scrutiny as a result of the steeply rising price of fuel and other inflationary cost increases, but not all the worst fears expressed by operators have so far come about.

Although the level of aircraft usage and demand for air taxis fell during that period, activity has since returned to near normal levels, although the industry is experiencing little or no expansion at present. It is felt that the parallel increase in the price of fares on scheduled flights, and route cutting, has brought home to many operators the value of private aircraft.

Nevertheless, many companies have carried out stringent cost examinations of their operations and begun monitoring flight programmes far more carefully. Although few have sold their aircraft, it is felt that the worst of the economic crisis is yet to come and future emphasis will be on efficient use. Nevertheless, if the aircraft have been bought and used for the right reasons, they will continue to be valuable.

Necessary

According to the chairman of the Business Aircraft Users' Association, Mr. Angus Charrington, many of its members have decided that private aircraft are necessary, just as cars or other vehicles, but that usage should be carefully watched. But the drastic cutback during the last months of 1973 had been too severe.

The operation of Bass Charrington's two aircraft, a Cessna 401 and a Cessna 421, is perhaps typical of private aircraft use in British industry, with the company's interest widely spread between Scotland, Ireland, Wales and Belgium, the aircraft have been kept fully occupied carrying employees between them. But now it has been decided that the older of the two aircraft will not be replaced and the company is making do with four pilots instead of five. In better times this would probably not have been necessary.

Another factor which private operators regard with some alarm is the increase of VAT on private aircraft to 25 per cent., which many believe is evidence that the Government continues to look at private aircraft as a luxury. Although some concern has been expressed at the effects this will have on sales of U.K. made aircraft, Hawker Siddeley, manufacturer of the successful HS-125, believes it is too early to become pessimistic. With 336 of the aircraft now sold, it is likely that the company's marketing efforts will now be concentrated on overseas sales.

With the U.S. markets fairly flat at present, Hawker Siddeley is looking towards the Middle East, Africa and South America for a higher proportion of its future sales and believes that if the HS-125 can be developed to keep pace with competitive aircraft, its future is assured.

The company has noticed a trend towards greater turnover in the secondhand aircraft market, although it regards this as beneficial in some ways. For example, if an HS-125 is sold by a British company to a Third World country it is quite possible that that country will build up a fleet of aircraft, as have Brazil and Malaysia. Hawker is confident enough in its product to believe that the more widely it is seen and used, the more it will be appreciated.

Looking at the situation in North America, manufacturers have had to curtail production of business and light aircraft, but demand has picked up enough in recent months for the industry to predict that output this year will be greater than in 1974. The ability of the industry to hold up so well during economic stress has surprised many companies.

Ambulance

Beechcraft has reported that international sales rose by 58 per cent. in 1974 compared with the previous year and 1975 sales are up 23 per cent. over the same period for 1974. It believes that international markets are gaining strength, particularly in the field of ambulance work, photography and for civilian and military pilot training.

The company predicts a continuation of this growth as economic development brings with it the greater need for mobility and has consequently strengthened its marketing network geographically and in the number of sales and service outlets covering high-growth areas.

As in the U.K., it appears that the effects of the oil crisis on the North American market have not been wholly detrimental. It is suggested that the speed limits for road travel and rising fuel prices which resulted in airlines last year reducing schedules by more than 1,200 flights on the average day and more than 400,000 flights annually to conserve fuel, have worked in favour of private business travel.

Should fuel prices continue to rise, which seems likely in the long term as the administration seeks to reduce imports, it could give added impetus to business flying. There is also evidence, according to industry sources, that the high loads being carried by airlines could also stimulate the purchase of business aircraft.

There is speculation whether this has contributed to the fact that in the United States there are more and more first time buyers of business aircraft, particularly in the piston-engined class. There is also a significant number of operators of this type of aircraft which are upgrading to turbine powered. In the case of the Cessna Citation, around 27 per cent. are now being sold to operators who previously owned Cessna 421s.

The company believes export prospects remain strong, although it expressed the opinion that the United Kingdom, Italy and France had become less favourable markets. Scandinavia, the Netherlands, Germany and Australia looked good this year. Beech has also reported strong demand for its aircraft, particularly the Super King Air on which it is working off a backlog of orders.

Similarly Gates Learjet is stretched to complete 85 aircraft on order, although reports a fall in new orders which it attributes to delays in getting its new turbofan-powered Model 35 and 36 into production. It is now seriously looking at ways of increasing production capacity.

So with both American and British manufacturers of business aircraft clearly looking at export markets, mainly outside Europe, for a slice of future growth, what of the domestic prospects? It seems clear that if the economic indicators prove correct, the U.K. will provide a very limited market both for sales of business aircraft and air-taxi work for some time to come. Nevertheless, as McAlpine Aviation has noticed, the country's export drive has continued to provide business to the rest of Europe, the Middle East and other major trading areas.

The North Sea oil activities still provide the company with between 10 and 15 per cent. of its business and it estimates that this year will be comparable in many ways to 1973, before the oil crises. The urgency with which businessmen need to do business abroad has, according to McAlpine, had a significant effect on its level of business. Nevertheless, the picture for the U.K. as a whole, both as buyer of aircraft and as a market for air taxi operators, remains uncertain.

For that reason it is perhaps opportune that the General Aviation Manufacturers' and Traders' Association has just been formed, with 36 members which include Rolls-Royce, Britten Norman, Sperry and representatives of French and American manufacturers.

The main aim of the organisation is to act in the interests of the general aviation industry, in both private and business sectors. It intends to do this by working to keep airfields open, keeping taxes down and playing an informative role. Furthermore it will actively promote the sale and use of aircraft.

Lorne Barling

Crucial time for supersonics

THE NEXT six months could be decisive for the future of the Anglo-French Concorde supersonic airliner, for in that time will be determined much of the pattern of operations when this twice-the-speed-of-sound airliner enters fare-paying passenger service early next year. Of the 16 production aircraft so far authorised by the two governments, four have flown (bringing to eight the number of Concordes airborne to date, including the two prototypes and the two pre-production aircraft), with two more production aircraft due to fly by the end of this year. By the time British Airways and Air France start the first fare-paying passenger services in early January to Bahrain and Rio de Janeiro respectively, each airline should have taken delivery of two aircraft, enough to guarantee regular services on the limited scale initially envisaged, building up later as both deliveries and route approvals multiply.

At this time, the long development period of the Concorde, from the conception of the programme in November, 1962, and involving the outlay of £853m. by the end of 1964 (£436m. by the U.K. and £417m. by France) is nearing completion. At the end of 1974, another £243m. remained to be spent (£112m. by the U.K. and £131m. by France) by 1976-77, when the development programme ends, making a total development cost of £1,096m. By the end of April this year, the overall flight test programme had reached nearly 4,000 hours, involving over 1,820 flights, of which over 1,200 hours in more than 1,000 flights had been supersonic. With most of the detailed flight testing completed, the major task remaining for this summer is the 850 hours of "endurance flying" by the makers and the airlines, aimed at proving the aeroplane in its airline configuration, ready for the award of the vital Certificate of Airworthiness some time this autumn. This endurance flying will consist of a series of long-haul flights from the U.K. and France to many parts of the world, including those to which fare-paying passenger services will be flown next year, carrying representative airline loads under full airline operating conditions. These flights—to Rio de Janeiro, New York, Washington, Bahrain, Singapore, Hong Kong, Tokyo and Sydney or Melbourne, will not only be used by the airlines and the manufacturers (British Aircraft Corporation and Aérospatiale) to complete the flight test programme and iron out the details of airline operations—completing the training of flying crews, cabin staff and ground engineering and other handling staff, such as catering and baggage loading personnel—but also by the civil aviation authorities of the overseas countries concerned as a means of assessing public attitudes to the whole concept of supersonic airliners.

Criticism

There has been much criticism of supersonic flying in general, and of Concorde in particular, over the past few years, especially from environmental lobbies who have attacked the overall concept on the grounds of potential stratospheric pollution, and Concorde itself on the ground of the noise it will make while approaching and leaving major airports such as Kennedy (New York), Sydney and Tokyo. Efforts by the manufacturers, and more recently also by the airlines, to allay these fears have not yet been as successful as the U.K. and French Concorde protagonists would have liked. It is clear that during the next few months there will be a continued, concerted attack by the anti-supersonic lobbies worldwide, not only to prevent the start of fare-paying passenger services next year but also even to halt the preliminary endurance flights scheduled for this summer. It will require all the publicity skills as well as the diplomatic efforts of the airlines, manufacturers and U.K. and French Governments to break down this summer the prevailing image of Concorde as a noisy, polluting monster, and to substitute instead the image of an aeroplane that is capable of fitting into the existing world air transport system with the minimum of disruption. A substantial amount of work in this direction has already been carried out, especially by

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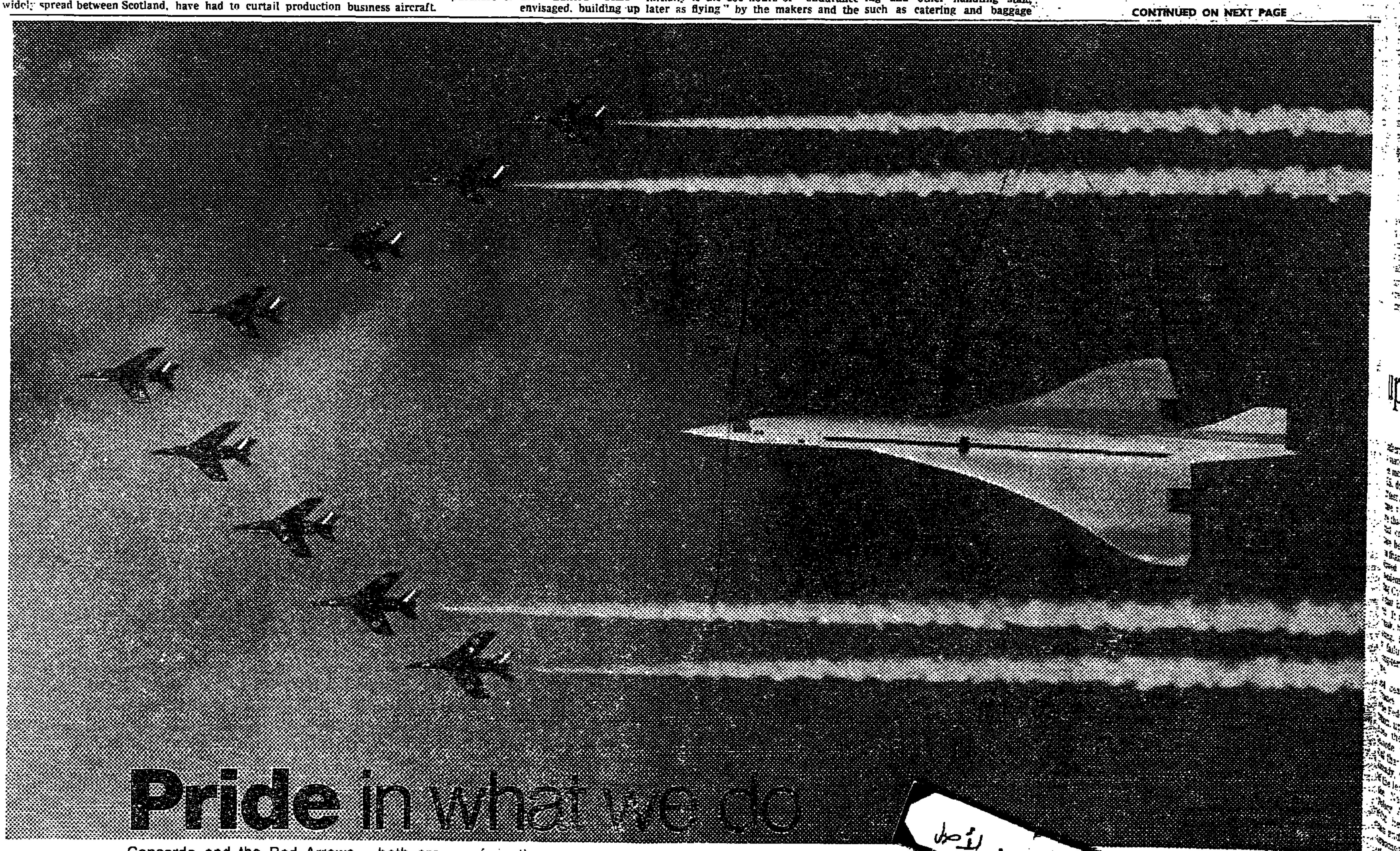

A breathing space for cargo sector

ONE FACT that emerges from any assessment of the air cargo industry at the present time is that it has run out of steam. This is probably no bad thing, because it has been apparent for some time that what has been needed most by those within the airline industry who have developed air cargo to its present level of sophistication is a brief period to regain their breath and to take stock.

For it is not much more than fifteen years ago that the airlines took a really serious look at the economics of cargo carrying and realised its potential as a revenue earner. The outcome has been the progressive separation of cargo traffic from passenger-orientated procedures and management into what has become a vast satellite industry in its own right, supported by fleets of specially-built cargo aircraft, specially-built terminal buildings and warehouses equipped with the most advanced types of handling systems — much of it automated — armies of clerical and manual workers specially trained in international requirements and procedures controlling the movement of goods between one country and another, and a fast-developing communications and computer network designed to provide an interchange of information on a global basis.

Potential

The speed and energy with which all this has been accomplished has been such that the industry has had little opportunity to pause and consider just where it is heading and what needs to be done to maximise its revenue-producing potential. The fall-off in cargo traffic carried by the scheduled operators, which set in towards the end of last year and has continued ever since, provides the opportunity for just such a stock-taking — not just in cargo, but throughout the airline industry as a whole.

The most urgent need is to isolate and then act upon, the factors responsible for the continuing rise in losses reported by almost every scheduled carrier. Not all of them can be blamed on inflation or on the world economic situation, and where this is so the airlines appear to be either unwilling or reluctant to apply a little self-help.

The most obvious example of this is the over-capacity with which they are saturating certain routes, of which the North Atlantic is the classic example. Here, the number of flights is totally unrealistic. Figures issued by the International Air Transport Association (IATA) for passenger and cargo traffic carried over the route during the past two years show that the demand simply does not exist for flights that have been, and continue to be, operated.

Last year, for example, the 22 international airlines then operating on the route mounted 66,088 passenger flights together providing over 16m. seats—and yet no more than 9.34m. of them were occupied. This means that for every 240 seats provided there were only 140 passengers. This is difficult to understand at a time when the airlines are facing the most serious financial crisis in their history.

So, during the breathing space that the lull in cargo and passenger traffic has provided, the first priority would seem to be to get to grips with over-capacity. Once supply is matched to demand, the next task must surely be a complete overhaul of the IATA cargo rate structure.

This is currently under review at Cannes, where senior cargo executives of the international airlines of IATA are attending their bi-annual composite cargo conference, at which the rate structure is the major topic. If discussion on rates follows its usual course at this year's conference, it is expected to develop into a power struggle between the major carriers operating large-capacity aircraft—mainly the wide-bodied types—and the smaller airlines, whose pattern of operations do not require them. One of the difficulties in such a situation is that while the major carriers are usually in agreement on the principal changes that should be made to make air cargo more attractive to shippers, the smaller carriers, who are not so deeply involved in cargo and are therefore less experienced in it, tend to gang up against the "big boys" in the business, preferring to leave matters as they are rather than agree to changes from which they are unlikely to benefit.

Bigger aircraft with greater cargo capacities coupled with the big terminals and costly equipment and other ground facilities that are required to handle them has made a complete overhaul of the rate structure imperative if the full potential of cargo is to be exploited to provide the additional revenue the airlines need. The structure was formulated originally in 1946, when cargo sent by air consisted mainly of urgent parcels weighing no more than a few pounds, with an occasional package of perhaps 100 lbs or 45 kilos, which to-day is the minimum weight (it was then the maximum) to which nearly all the rate permutations are geared.

Handling

With the high-capacity aircraft now dominating most of the world's air routes, the airlines have found that it is no longer economic to carry small, low-weight consignments. The revenue they generate does not even cover ground handling costs, and unless they are consolidated with other packages of similar weight and loaded on pallets or in containers by forwarding agents, the major airlines would prefer not to carry them.

Because of this, there is to be a concerted effort at the Cannes conference to obtain agreement on the abolition of the 45-kilo break-weight, as it is called, and to replace it with a much higher weight, which the major airlines would like to see at somewhere between 500 and 1,000 kilos. It is at this minimum break-weight that shippers start to receive discounts on what is known as the general rates for consignments and on the special rates which apply (and there are literally thousands of them) to specified commodities. If the airlines can agree to raise the minimum weight at which discounts start to apply to, say, a ton (1,000 kg.) they estimate that there would a dramatic response from the forwarders with a corresponding increase in traffic.

But this would not suit the airlines operating smaller types of aircraft with limited cargo space, which in many cases would not accommodate individual loads of the weight the larger carriers are seeking. And this could—as on previous occasions when attempts have been made to increase the minimum weight—produce a stumbling block at Cannes.

Another area which is causing a good deal of concern to the scheduled carriers and which will undoubtedly come in for discussion at Cannes is the increasing volume of cargo that the forwarders are now diverting to the independent charter operators. In the U.K., in particular, this is proving a major problem to the international scheduled carriers. It has been aggravated by the recent decision of the Civil Aviation Authority to remove the restriction on the number of consignors whose goods may be carried on a chartered aircraft, and its intention to remove at the end of this year the present restriction on the minimum weight (currently 1,000 kg.) of each consignor's shipment.

These moves, and the CAA's decision to allow the charter operators a virtually unlimited number of flights so long as they can justify demand, mean in effect that from next year they will be free to operate more or less on a par with the scheduled carriers, but without the same massive overheads and operating expenses which scheduled services entail. In some respects, the combined operations of the charter operators might come to be regarded as providing the "second force" air service advocated in the report of the Edwards Committee six years ago, even though not operating exactly on the lines envisaged by that committee.

Competition

With this prospect in view, and the increasing competition it will bring, it seems inevitable that the IATA airlines will be compelled to devise some kind of acceptable formula under which they will be able to enter the split charter market, if only to utilise the surplus aircraft capacity which nearly all of them have at present as a result of the continuing fall-off in traffic. To do so would also enable them to re-establish their hold upon the major forwarders whose attentions are gradually being turned to the charter airlines, albeit it indirectly, through companies most of them have formed specially to handle charter traffic.

There is little doubt that in the rapid and widespread changes that have taken place in the pattern of cargo operations in recent years, coupled with the decline in both passenger and cargo traffic, the scheduled airlines are facing formidable problems. Only by pausing, consolidating their resources and agreeing to adopt common policies, are they likely to achieve the full benefits that cargo can bring.

Peter Hering

Supersonics CONTINUED FROM PREVIOUS PAGE.

the manufacturers. Concorde has already visited 69 cities in 39 countries, including ten airports in the U.S., during the course of its flight test and demonstration programme to date, and while it is true that there have been substantial criticisms many of these have been founded more on fiction than on fact, and have been allowed to develop almost into a condemnatory mythology concerning Concorde. It is this damage that has now got to be redressed. It is not going to be an easy task, but it will be well worth doing, for upon its success or failure depends the entire long-term future of the aeroplane.

A good deal depends upon the attitudes adopted in the U.S. by the Federal Aviation Administration, upon whose recommendations the final approval for Concorde to operate into and out of that country will depend. Already, the FAA, in pursuance of the legal requirements under the National Environmental Policy Act of 1969, has held public hearings in both Washington and New York into the environmental and noise aspects of Concorde operations at Dulles and Kennedy Airports. Those hearings were taken seriously by the U.K. and French governments, British Airways and Air France and by the Concorde's makers, and the statements submitted in writing, together with the oral evidence given at them, undoubtedly went a long way towards correcting much of the emotional attack directed against Concorde by some of the environmental lobbyists.

Emotion

The view taken on this side of the Atlantic is that provided the Concorde is considered dispassionately, it is likely that its case for being allowed to operate limited services to Dulles (two a day) and Kennedy (four a day) will be upheld by the FAA when its final Environmental Impact Statement is issued soon.

Unfortunately, however, it cannot be taken for granted that fact will be permitted to over-ride emotion, and a continued effort by all parties will be necessary to ensure that a decision favourable to Concorde is taken.

In the meantime, production of the aircraft has been slowed to ensure that manufacture and assembly can be kept ticking over pending the inflow of orders—which the makers are confident will come once the aircraft has entered airline service. With five aircraft firmly ordered by British Airways and four by Air France, this leaves seven Concordes out of the 16 authorised still to be sold. Currently, negotiations are in progress with Iran Air on an order for three aircraft, while the Civil Aviation Administration of China also holds options on three aircraft. If these are taken up, one Concorde will remain to be sold.

Orders

The manufacturers are not expecting any further firm orders beyond these (on the assumption that Iran Air and CAAC confirm their options this year) until fare-paying passenger services have shown the world's airlines just what Concorde can do. But they remain convinced—and there are signs that many airlines are now also coming to recognise this—that the advent of Concorde services will revolutionise the first-class traffic on the routes the aircraft flies, and that within a year or so of the start of operations there will be new division in the world air transport industry—between those airlines which have Concorde and those which do not.

The makers feel that this is likely to give rise to a new pressure of demand for Concordes, which they want to be able to meet as reasonably soon as they can. To do this, it will be necessary to keep the Concorde production line intact, so that it can be accelerated when the orders arrive. It is questionable whether they can maintain this situation throughout the whole of 1975, for some of the very earliest parts-fabricators in the production chain are already running out of work, and by the latter part of this year will be needing the stimulus of new orders to encourage them to remain in the programme. It is at that time, therefore, that the makers may well have to ask the two Goverments for permission to build the next three aircraft, for which the ordering of long-dated materials has already been approved. Whether the Governments will feel able to justify the expenditure involved will depend entirely upon the state of the order book—or at least upon the attitudes towards Concorde prevailing world-wide.

If, by then—say about October-November—with passenger services imminent Concorde has come through its endurance flying without mishap, has won its Certificate of Airworthiness, has managed to win round some of the present objectors and has begun to convince many of the airlines that the supersonic era is here to stay, the two Governments may well feel that they can authorise further spending on more aeroplanes, even in anticipation of orders. This would be the biggest single gesture of confidence the Governments could make to help the start of fare-paying passenger services to Rio de Janeiro and Bahrain early in January, followed by services across the Atlantic to New York in April (subject to the necessary foreign government approvals having been obtained).

It is thus towards this goal that everybody associated with Concorde will be working this summer. For what is really now clear is that Concorde will go into service, somewhere in the world, early next year. What is not yet so clear, but should become so over the months ahead, is just how far this start to supersonic passenger operations can be exploited so as to ensure that it does not fizzle out through apathy on the part of the travelling public or the airlines, or through objections on the part of environmental minority groups. This is why everything that is done in the months ahead will be so vital to the project's long-term future.

Activities

Just how far the activities of the Soviet Union's TU-144 airliner will help contribute to the overall start of the supersonic era is far from clear. At this time, it is believed that the aircraft will enter service on flights across the Soviet Union between Moscow and Khabarovsk some time early in 1976—about the same time as Concorde. The Soviet Union is also expected, in discussions with the U.K. and France this summer, to press for reciprocal rights for the TU-144 beyond London and Paris to the U.S. and other parts of the Western Hemisphere, in return for rights to fly the Concorde between Western Europe and the Far East across the Soviet Union via Novo Sibirsk. It is not clear at present where the TU-144 will fly outside the Soviet Union, apart from operations to Western Europe and across the North Atlantic. But it seems obvious that sooner or later the Soviet Union will want to introduce this airliner to destinations in Africa and South-East Asia, if not also to South America. This can only help promote the overall development of the supersonic transport era, and ensure that it comes to stay. As with Concorde, therefore, the next few months will be among the most critical for the TU-144, with much more being heard about it world-wide.

Michael Donne

AEROSPACE VIII

Improved quality of Soviet industry

AEROSPACE DEVELOPMENTS in the Soviet Union have for long been a substantially closed book to the West. Only occasionally have top-level industrial or Ministerial delegations been permitted to visit selected Soviet aircraft manufacturing facilities—notably those involved in the TU-144 supersonic airliner—while military facilities have been kept entirely secret. Questions at Press conferences are answered vaguely or avoided. Thus, there are virtually none of the standard criteria available to the West for determining the size of the industry in the Soviet Union. The customary statistics on employment levels, volume and value of output, and even location of plants, that are commonly available in the West are kept carefully hidden or at best are deliberately vague.

Accidents

Enough is known, however, for the West to be able to say that the Soviet aerospace industry is undoubtedly on a par with that of the U.S. in terms of size, and certainly in capabilities, both military and civil. Those who have criticised the Soviet Union's aerospace capabilities on the grounds of occasional accidents to civil aircraft—such as the TU-144 at the Paris Air Show in June, 1973, and to other airliners in service with Aeroflot or foreign airlines—or because of occasional failures with manned and unmanned space ventures, tend to forget that the West itself has a substantial number of airliner accidents each year, and has also not been without its difficulties and on one occasion its fatalities in the manned and unmanned spaceflight programmes. Everything that Western designers have seen of Soviet civil aircraft at the Paris Air Shows in recent years, or on the aprons of Western airports, and reports from NATO observers closely watching the changing Soviet military aircraft scene, all indicate that Soviet design and engineering standards have improved considerably and are now very high, and production capabilities efficient.

It must also be remembered that the Soviet Union is virtually self-sufficient in its aerospace industry. While it tends to try to export some of its productions, it imports virtually nothing and it is only occasionally that glimpses can be obtained of the difficulties the industry experiences. One such that has recently emerged appears to be a shortage in the Soviet Union of some advanced electronic and avionics capabilities (especially air traffic control equipment), evidenced by the apparent desire to buy both U.S. and U.K. know-how and in some cases products also. Furthermore, the Soviet Union has also been showing interest in Western aero-engine technology, as indicated by strengthening interest in the Rolls-Royce RB-211 engine, and in some heavy types of aircraft, notably the Boeing 747 and the Lockheed Tri-Star and McDonnell Douglas DC-10 tri-jets.

At this time, it does not seem that the Soviet Union is developing a Jumbo jet type of its own (although it is working on a medium-haul airbus), and it has also probably not yet pushed its civil engine capabilities to the same level of achievement as the RB-211 and the new Franco-U.S. CFM-56. That it could do so if it wished seems probable, since nothing about any of those Western engines is secret, the detailed technical and engineering information being freely available on a commercial basis—indeed, being given away at the Paris and Farnborough international air shows. But it is probable that the Soviet Union feels that it would be cheaper in the long run for it to buy the aircraft and engines it needs from the West, thereby saving it from duplicating work already done. Discussions between the Soviet Union and the West, particularly the U.S., however, have not yet reached the stage of firm orders for either aircraft or engines, and the U.S. Congress has expressed strong doubts as to the wisdom of such sales.

Under the general direction of the Ministry of Aircraft Industry the Soviet industry is basically organised into a system of "design bureaux," headed by some of the most famous names in world aviation. While some of these bureaux have specialities of their own, others cover a wide spectrum of aviation activities. The principal bureaux include Antonov, mainly engaged in heavy transport aircraft, especially for cargo carriage; Beriev, at work on amphibious aircraft and water-based types; Ilyushin, which specialises not only in heavy transport aircraft but also military patrol and transport types; Kamov, a helicopter specialist; MiG, probably the most well-known of all Soviet design bureaux in the West for its range of fighters and other combat aircraft; Mil, also a helicopter specialist, which has produced some of the world's most spectacular helicopter designs, such as the V-12 heavy-duty freight-carrying helicopter and the Mi-10 Flying Crane; Myasischev, a bomber producer; Sukhoi, a fighter designer; Tupolev, which after MiG is also perhaps the next best known bureau in the West, for a long line of transport aircraft, culminating in the TU-144 supersonic airliner, and for its range of bombers and other combat aircraft; and Alexander Yakovlev, designer of interceptors and smaller transports.

Research

These bureaux are supported by a series of research establishments, including the Central Aerohydrodynamics Institute (the Soviet equivalent of the U.S. National Aeronautics and Space Administration); the Central Design Office, which assigns the design requirements to the various bureaux; the Central Engine Research Office; the Scientific Institute for Airplane Equipment and the All-Union Institute for Aviation Materials.

The Minister in charge of all this aerospace activity is Mr. Pyotr V. Dementiev, who has held the post for more than 25 years, through the ruling periods of Stalin, Malenkov, Bulganin, Krushchev and Kosygin and Brezhnev.

Spearheading the Soviet Union's civil aviation development activities is the supersonic Tupolev TU-144, which in design is similar in many ways to the Anglo-French Concorde. Despite the destruction of one TU-144 in the spectacular crash at the Paris Air Show in 1973, the Soviet Union has pressed on with the development and flight-testing of the aircraft, and all reports reaching the West indicate that series production is in progress at Voronezh, and that the first fare-paying passenger services are planned for early in 1976—broadly comparable with the Concorde. Aeroflot crews are already being selected and trained. The precise volume of TU-144 production authorised is not known, but reports have suggested that Aeroflot will initially have at least ten of these aircraft, with others being built in accordance with demand.

Backing up the TU-144 effort is a wide range of subsonic types, again largely from the Tupolev design bureau, including the three-engined medium-to-long-range TU-154, which can carry 164 passengers over ranges up to 5,000 km., at a cruising speed of 900-950 km. per hour; and the TU-134A twin-engined short-to-medium-range airliner, capable of carrying 80 passengers up to distances of 3,000 km. Both of these aircraft are now in regular service with Aeroflot, and are likely to prove the mainstay of the Aeroflot fleet for a long time to come, along with the Ilyushin Il-62m. high-density, four-engined long-range transport. Aeroflot plans to carry over 90m. passengers this year.

In addition to these aircraft, the Soviet Union is now working on the development of the Ilyushin IL-86 wide-bodied four-engined airbus, reported to have a maximum take-off weight of about 400,000 lbs that would put it broadly in the same category as the earlier models of the U.S. trijets, the Lockheed TriStar (430,000 lbs) and the McDonnell Douglas DC-10 Series 10 (440,000 lbs.), but larger than the European A-300 airbus. This aircraft, capable of carrying 350 passengers, is due for short to medium range high-density routes of up to 4,000 km. throughout the Soviet Union and overseas, is expected to fly soon, and is expected to be a major unit in the Aeroflot fleet in the later 1970s and through the 1980s. The design of the aircraft follows that of the wide-bodied Boeing 747, with the four Soloviev engines mounted in pods under the wings, instead of being mounted at the rear of the fuselage (a design configuration originally adopted for the IL-86 but subsequently changed).

Short-range

Yet another new aircraft which is expected to make its appearance in the West soon—and may be seen at the forthcoming Paris Air Show at Le Bourget—is the Yakovlev Yak-42, a 100-120 passenger short-field trijet (with its three Ivchenko A-36 engines at the rear of the fuselage). Intended for short-range work, the Yakovlev design bureau is planning for production of about 1,600 aircraft to meet the expected demand over the next decade or so for an aircraft capable of short-haul work from short fields, bringing jet service down to those many communities in the Soviet Union that have never had it before. It is expected that the Soviet Union will make a major export effort with the Yak-42, seeking its Certification in the U.S., and with Western European and South-East Asian markets also in mind. Environmental acceptability has been built into the Yak-42—the designer, Alexander Yakovlev, has said it is intended to meet U.S. Federal Aviation Administration noise requirements—and it is intended for operation with a two-man crew.

Soviet military aircraft and missile capabilities have for long been recognised in the West as being among the best in the world, and there is little doubt that some of the most recent developments in these fields have forced the U.S. Defence Department and aerospace industry to quicken the pace of their own developments. Among some of the most recent developments have been the Mig-25 Foxbat, widely credited in the West as being the best combat aircraft in the world until the emergence of the USAF McDonnell Douglas F-15 and the U.S. Navy's Grumman F-14 Tomcat; the Mig 23U Flogger-C swinging-wings combat aircraft; and the Sukhoi Su-19 Fencer swinging-wings ground-attack fighter-bomber. A recent issue of the "International Defence Review," one of the West's major military journals, recently credited the Fencer with being capable of interdiction (penetration) missions in the 200-400 km. range, so that from a base in Poland it could reach the NATO Central European region west of Frankfurt and return, flying at low level. For longer-range penetration, the Soviet Union has the Tupolev Backfire swinging-wings long-range bomber.

Arsenal

Collectively, these represent a formidable arsenal, and a massive achievement for the Soviet aerospace industry. Most NATO observers expect the Soviet Union to unveil soon some further military aviation developments. These glimpses of what is going on seem to occur every five years or so, and it is now eight years since the last major revelations occurred at the Domodedovo Military Air Display. In view of the emphasis that the Soviet Union has been placing in recent years in the expansion and improvement in its overall military capabilities, extending to ground weapons and conventional forces and to submarines and other naval vessels as well as to aircraft, it is not beyond the bounds of possibility that some new military aircraft protoypes will be unveiled soon. Certainly, the Soviet Union is unlikely to stand by and watch such new developments as the F-16 and F-17 lightweight fighters, and the Rockwell B-1 long-range strategic supersonic bomber, be undertaken without some response. Everything that the aerospace designers of the West have seen indicates that the military aerospace development capabilities of the Soviet Union are extremely high, with an ability to produce new designs comparatively quickly—probably because the Soviet Union is not as concerned as the West at the volume of its defence spending, and because the aerospace industry there is less involved in fighting for money at political levels than it is in the West. This is not to imply that there is not competition between the various design bureaux for such development work as is available. It has been repeated on a number of occasions by leading Soviet aircraft bureau chiefs that competition between them is encouraged to ensure that the very best designs are produced. Also, the Soviet industry has the benefit of very long production runs, matching those of the U.S. industry on military work but going far beyond the production runs that the U.K. and other European military aircraft manufacturers have been able to achieve so far—although efforts are now being made to rectify this, for example, with the Anglo-West German-Italian Multi-Role Combat Aircraft (MRCA).

Michael Donne

Swedish uncertainty

AFTER FAILING to win the NATO Starfighter replacement competition with its Viggen JA37 interceptor the Swedish aerospace industry is waiting for the political decisions which will determine its long-term future. By 1977 the Swedish Government and Parliament will have to decide on a 15-year "perspective plan" for Swedish defence for the period up to 1992 and on a five-year procurement programme for the 1977-82 period. A defence commission is due to report in the autumn of 1976. For the time being the only certainty is that in terms of real purchasing power government expenditure on the development and production of Swedish defence equipment will be cut from the level reached during the late 1960s and early 1970s.

The political dcisions will involve a re-assessment of the nuances of Swedish neutrality. So far, that neutrality has been axiomatic with the maintenance of an independent defence organisation, credible enough to make an aggressor think twice before attacking Sweden. As defence costs escalate — and *détente*, influences the political climate — the Swedes have to decide how far they can (or want to) maintain credibility without abandoning their present relative independence of foreign equipment.

The debate is a complicated one. Some Swedish politicians argue that in the '80s and '90s Sweden's neutrality will no longer call for a strong defence posture. Some military experts believe the emphasis should shift from sophisticated, technically advanced equipment able to tackle an aggressor before he reaches the country's borders, to a defence based on a tough, popular resistance.

Both arguments are vigorously contested within the military and political establishments, but if the Swedes choose to maintain the "Swedish profile" and their sophisticated defence system, they will have to find the money for the research into and development of at least essential equipment.

Workforce

The key questions for the aerospace industry are, first, whether there will be a demand for a new generation aircraft to follow the Viggen and, secondly, whether the continuing reduction in numbers of aircraft ordered will reach a level at which it becomes uneconomic to research and develop new Swedish equipment. Saab-Scania, for instance, envisaged in the '60s production of 800 aircraft of the Viggen series: some 350 aircraft are now expected to be built. Current orders will enable Saab-Scania to maintain its production workforce more or less intact at least until 1985, but the situation is more critical for the 2,000 employed on the research and development side, unless new projects are started.

Saab-Scania's hopes were raised earlier this month when the Swedish Air Force submitted an "Aircraft Systems Plan 85" to the Government, calling for the development of a new light attack/trainer aircraft. It also proposed that the more powerful and more advanced JA37 interceptor version of the Viggen now in production should be modified into a new medium attack aircraft to replace the earlier AJ37 attack version of the Viggen in the mid '80s.

New weapons for these attack units should be procured "either within the country or from abroad," the Air Force rather indecisively stated, leaving open the question of whether Saab-Scania should be allowed to go ahead with the development of the new missiles it has been studying—although in a May Day speech the Defence Minister implied that new Swedish missiles would be produced.

Proposed

If accepted by the Government and Parliament, the Air Force proposal would mean that Saab-Scania could maintain its production staff through the next decade and also its development capacity but "at a somewhat lower level than before." The development costs for the two proposed aircraft over the 1977-85 period have been put at Kr.2bn. (£220m.), of which the major share would go on the new attack/trainer. This compares with Kr.4bn. spent on researching and developing the Viggen series.

The total cost of the Viggen series (some 350 aircraft) from the moment of conception in 1952, including Air Force operation and maintenance costs until the year 2000, has been estimated by the Defence Procurement Board (FMV) to be Kr.17bn. (£1.88bn.) in 1974 prices. This figure illustrates the remarkable cost effectiveness of the Swedish aerospace industry, resulting primarily from the efficient use of a small but very highly skilled workforce and from the close co-operation at all stages among the Air Force, the Defence Procurement Board and the manufacturers.

Other aircraft industries and national defence procurement organisations could learn much from the Swedish system. Of special interest is the "incentive" pricing mechanism, which depends on a sophisticated indexing system that allows the manufacturer to reap the benefit of increased efficiency but punishes him for slip-shod methods.

In the long run, however, competitive unit costs demand long production runs and it is becoming increasingly important for the Swedish aerospace industry to find export markets, an aim which is considerably handicapped by Government regulations which prohibit exports of attack weapons to politically sensitive areas. Saab-Scania, for instance, cannot compete in the Middle East market.

The Swedish industry has notched up sales of nearly Kr.1bn (£110m.) over the past five years, principally on aircraft exports to Denmark, Finland and Austria, and it has not entirely abandoned hopes of selling the Viggen interceptor inside NATO. If the four-nation group breaks up over the choice of the American F-16, with the Belgians plumping for the French Mirage, the Swedes believe they would have a chance of selling the Viggen to Denmark, which has previously bought two squadrons of Drakens from Saab-Scania. In the recent discussion of the political implications of NATO countries buying from neutral Sweden, the fact that the Swedes had already sold aircraft to a NATO country tended to be overlooked.

Australia remains a distant (in more than the geographical sense) prospect. An Australian team made a thorough assessment of the Viggen in 1973, but the longer the Australians postpone the replacement of their Mirage squadrons, the more likely it becomes that they will choose an American or French aircraft of later vintage. The Viggen remains in contention in Austria, which has been discussing the possibility of leasing Drakens from the Swedish Air Force as a temporary solution to its plans for re-equipping its fighter squadrons.

Saab-Scania has sold nearly 200 of its 105 twin-jet trainer/attack series, including 40 to Austria, and has a new version, the 105G, ready but not yet in production because of lack of orders. More than 100 Saab MFI-17 supporters, a light rugged, piston-engined STOL aircraft, designed for close army support, have been sold in six months, including 32 to Denmark at a price of Danish Kr.25m. (£1.8m.) and an undisclosed number to Pakistan.

Co-operation with a foreign manufacturer or group on a civil project could solve Saab-Scania's problem in keeping its research and development staff together, and its executives are looking for "suitable partners" to develop a 200-seat airliner—while recognising at the same time that civil aviation is hardly in a favourable situation for such a project.

In the missile field Saab-Scania has done the basic research on a new air-to-air skin-homing IR missile, designated the Saab 372, intended for the Viggen interceptor. A full-scale mock-up of this missile is being shown at the Paris Air Show, together with the RB04E air-to-sea and RB05 air-to-surface missiles which Saab-Scania produces for the Viggen.

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Nordic Correspondent

U.S. manufacturers enjoy a good year

WITH FEW exceptions the past year has been a remarkably—indeed unexpectedly—good one for the U.S. aerospace industry. Most of the major aerospace companies have managed not only to weather a severe recession but also to turn in more than adequate profits. For example, of the five principal airframe manufacturers, all except McDonnell Douglas reported higher earnings for 1974 than for 1973, when the economy was in the final stages of a boom.

This buoyancy is undoubtedly the result in part of lessons learned during the recession of 1970 and 1971. While less deep than the present economic downturn, it was one of the most traumatic periods through which the industry has passed since the end of the second world war. Its impact brought Lockheed Aircraft to its knees and caused Boeing to decimate its labour force.

Prosperity

Since then, the industry has taken steps to improve its efficiency, reduce overheads and generally trim away some of the fat that had accumulated during a quarter century of almost uninterrupted prosperity. In some cases, aerospace companies have also been exploring diversification into new areas which offer applications for their advanced technological capability but which are commercially unrelated to the mainstream of their business. Boeing's ventures into mass transit, land reclamation and pollution control are but one example.

A much more important and fundamental reason for the industry's current strength, though, is the volume of Government contract work. The loss of business resulting from the U.S. withdrawal from Vietnam and the rundown of the space programme has been more than offset by a sharp increase in U.S. Government military procurement, as the Pentagon has turned its attention away from Indo-China to refurbishing its arsenal of conventional and nuclear weaponry.

These enlarged expenditures at home have been supplemented by a surge in demand for military hardware from abroad. Much of this demand has come from the newly prosperous Middle Eastern countries, of which Iran has been a major customer. One of its biggest orders is for 70 Grumman F-14 combat aircraft, and the Arab world is also in the market for a variety of airborne hardware. Coincidentally, the need of at least four European countries for a new fighter aircraft may provide an additional and profitable opportunity for at least one U.S. manufacturer.

The crop of young and liberal politicians who were elected to Congress for the first time last autumn are generally less sympathetic to the Pentagon's demands for funds than were some of the older generation which they replaced. But the Pentagon has resisted with reasonable success so far Congressional moves to cut its budget requests — in part because even the most radically-minded politician recognises that defence contracts can mean jobs in his home constituency. During a recession, that is an important consideration.

Moreover, the bitter hostility towards the military establishment that was displayed in some quarters of Congress during the Vietnam war has now largely dissipated. It has, to a certain extent, even given way to concern that American ability to maintain national prestige around the world is on the decline and needs to be reinforced. These various factors combined should ensure that military procurement expenditures will remain at a fairly high level for the foreseeable future.

Among conventional airborne weaponry, the largest new contract to have been awarded in recent months is for the F-16 lightweight fighter to be built by General Dynamics and powered by engines manufactured by Pratt and Whitney. The Air Force plans to buy at least 650 of the aircraft at $6.7m. each, and its orders could eventually run to as many as 1,000.

Replacement

The F-16 is the leading American contender as a replacement for the ageing F-104-G Starfighters in service with the Belgian, Dutch, Danish and Norwegian armed forces, which are also considering the Mirage F-1E and the Saab Viggen. Recently, however, a new competitor has entered the contest in the form of the F-18, developed jointly by McDonnell Douglas and Northrop and powered by General Electric engines.

The F-18 design has been selected by the U.S. Navy, even though the U.S. Congress had specifically demanded that the Navy choose the same basic aircraft as that selected by the Air Force. The Navy's decision is somewhat tentative and may face opposition on Capitol Hill. But if it sticks, the F-18 may command serious consideration by the four European NATO members, some of which prefer its twin-engine design to the single-engine configuration of the General Dynamics F-16.

McDonnell Douglas also has a major ongoing programme in the U.S. Air Force's order for the F-15 fighter—a considerably more sophisticated aircraft than either the F-16 or F-18. During the new fiscal year funding for the F-15 is due to rise to more than $2bn. from a little over $1bn. in fiscal 1975.

Among other major programmes, Rockwell International's contract to build the B-1 bomber remains vulnerable to Congressional criticism though so far it has survived its political opponents unscathed. Earlier this month the aircraft, which is designed to deliver a nuclear payload and can fly at twice the speed of sound, passed a critical test when the House Armed Services Committee defeated an attempt to reduce funding for the project. But it still has a number of hurdles to surmount before production is guaranteed—including a final decision by the Air Force as to whether it wants the aircraft at all.

U.S. DEFENCE DEPARTMENT BUDGET IN $M.

	Fiscal Year 1974	1975	1976
Budget authority requested	88,898	90,758	106,340
Total procurement	17,467	17,356	24,420
Aircraft	5,939	6,081	8,015
Missiles	2,682	2,545	3,305
Total research and development, etc.	8,195	8,616	10,237
Aircraft	1,667	1,615	2,123
Missiles	2,123	2,108	2,489

In the field of nuclear weaponry, Lockheed has secured a major contract for the missile to be deployed in the new generation of Trident long-range submarines, though development work on this project is reported to have encountered a number of technical problems. But the Navy has forecast that the missile will be ready for deployment before 1980 as scheduled. Lockheed is also developing the MARV warheads to be fitted to these missiles and thus stands to benefit substantially if the second round of Strategic Arms Limitation Talks between the U.S. and the Soviet Union fails to reach a limit on the number of warheads deployed by each side.

On the commercial side, the picture is somewhat more mixed. The outlook for new sales has been clouded by the squeeze on both domestic and international U.S. airlines resulting from high fuel prices and a decline in passenger traffic caused by the recession. It will be some months, at least, before airline business picks up strongly enough to provide a substantial number of new orders.

Thus airframe manufacturers will have to rely chiefly on their existing backlog to carry them through the rest of this year and early 1976. Perhaps the most secure position in this respect is enjoyed by Boeing, which had a backlog of almost $4bn. at the end of last year, more than its sales for the whole of that year.

Though the rise in fuel prices has diminished the popularity of Boeing's 747 Jumbo jet, which is now less economical to operate on most routes than the new generation of wide-bodied aircraft, Boeing continues to enjoy success with its 727, 737 and 707. All these aircraft have been in production for some time, and most of their development costs have already been written off.

Setbacks

The remainder of the commercial aircraft market is divided between McDonnell Douglas and Lockheed, which are competing in the wide-bodied aircraft arena with essentially similar products. Both companies have suffered setbacks in recent months, though for entirely different reasons.

McDonnell Douglas has suffered from the effects of a prolonged machinists' strike which has led to parts shortages and lay-offs. Furthermore, its DC-10 has been the target of much unfavourable publicity since March of last year, when a Turkish Airlines DC-10 crashed outside Paris, killing all 346 people aboard. McDonnell Douglas is currently defending itself against a number of lawsuits filed by relatives of the dead passengers, accusing it of liability in the crash.

Last February, the company announced that it had cut the estimated sales of the DC-10 by 20 per cent. to 400 because of sluggish economic conditions. As a result, costs per unit will rise, reducing future earnings. The company continues, however, to enjoy steady if unspectacular sales for its DC-9, of which more than 800 units have been delivered. A new "stretched" version of the DC-9, the Series 50, has been launched with encouraging initial success.

Like McDonnell Douglas, Lockheed faces the prospect of a downturn in the market for its wide-bodied commercial jet, the Rolls-Royce powered L-1011 TriStar, because of economic conditions. While it was negotiating with Textron on a financial link-up last year, Lockheed drummed up a sizeable number of new firm orders for the L-1011. But it is not known whether some of these will be cancelled or deferred now that the Textron deal has fallen through.

The backlog of L-1011 orders is sufficient to keep Lockheed's production lines operating at satisfactory levels for the rest of this year at least. Though the breakdown of the Textron deal was a blow to the company, its financial health is far sounder than it was 18 months ago, and its viability for the next 2½ years should be assured by a new lending agreement which it has negotiated with its banks.

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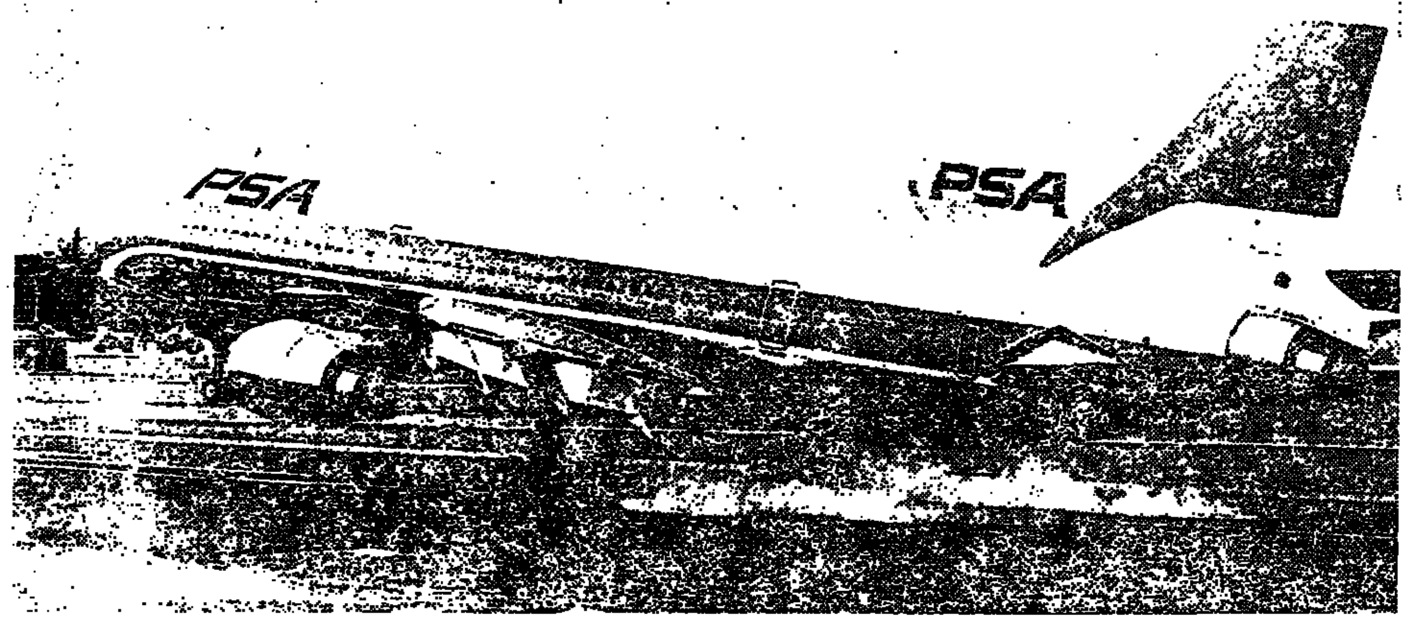
New York Correspondent



The Lockheed TriStar, which uses the Rolls-Royce RB-211 engines.

French pride suffers a blow

"THE TROUBLE IS," commented one senior French Cabinet Minister in a private conversation recently, "that the American product appears to be technically somewhat superior to ours." He was, of course, referring to France's fast fading hopes of landing the prized "arms deal of the century" for re-equipping four Nato countries with combat aircraft.

For in spite of successive accommodations on price and even an eleventh hour bid this month to pursuade the four customer countries of Belgium, Holland, Denmark and Norway that they should co-operate on the construction of France's Mirage F-1 M-53, the deal looks like slipping away across the Atlantic to General Dynamics' YF 16.

If it does, Dassault-Breguet stands to lose the minimum $1,500m. it would have earned from selling its Mirages as replacements for the four Nato countries' obsolete F-104 Starfighters. But the loss to Dassault would probably be more one of pride than profit.

Were it any other manufacturer in the French aerospace industry, though, it would be a very different story. For Dassault is the exception that proves the rule. Responsible for a major slice of France's record breaking arms sales of Frs.20,000m. last year, which lifted the country into the position of overtaking Britain to become the No. 3 arms dealer in the world after the U.S and the USSR, Dassault's success has only underlined the failues of the civil aircraft industry in France. Although the probable loss of the Nato contract is naturally a set-back, Dassault has already produced 80 of the new F-1 range for the French airforce, with the likelihood of further orders from the Middle East now that the French embargo on arms sales to combatant countries there has been lifted.

For the rest of France's aerospace industry, though, the sad truth is that civil projects do not have the same resilience. Even Dassault-Breguet would be the first to admit it, given the fate so far of the company's pilot venture into civil aviation with the twin-engined Mercure passenger jet.

One of the trio of projects backed by the French Government with the aim of bringing American domination of European markets to an end, Mercure can reasonably be said to have been even more disastrous than the Airbus or Concorde. The latest developments in the unhappy saga of Mercure have even produced a damaging split between the management of the French national airline, Air France, and the Government which is the airline's foremost shareholder, over Air France's adamant refusal to purchase Mercure.

Hopes

Civil aviation in France during the past decade has become more than ever an instrument of official foreign policy, with new and ambitious projects backed to the hilt in the hopes of winning for France a substantial share of the overwhelming passenger aircraft sales that now go to the U.S. At present, between 80-90 per cent. of passenger aircraft operated by Western European airlines are manufactured in America.

The twin-engined Mercure, produced by a Dassault-led European consortium, was designed to rival two winning U.S. medium-range aircraft: the McDonnell-Douglas DC 10 and the Boeing 727. But to date it has failed to sell outside France and cannot even be said to enjoy a ready market at home.

Air France's refusal to buy the Mercure as a successor to the 52 obsolescent aircraft it must soon replace—34 Caravelles and 18 Boeing 707s, the latter because they are particularly heavy fuel users—has already brought the airline a sharp rap over the knckles from Finance Minister Jean-Pierre Fourcade.

Earlier this year he challenged the airline's reluctance to accept the Government view that it should buy French with the blunt statement that if Air France directors did not ask the advice of their principal shareholders, the State, they would be changed. For good measure he added that he did not approve of private persons taking over public companies.

In view of the fact that the Government had just pumped a further Frs.120m. into Air France in the shape of subscription to a capital increase—while last year the airline's deficit reached Frs.575m.—M. Fourcade can be forgiven his pique to some extent. But it is precisely because Air France's financial position is less than healthy that it cannot afford to buy the Government-sponsored Mercure when its fiercest rivals operate the popular and tried DC-9s and 737s.

In the event: Air France now appears to have selected a compromise which does not involve buying the Mercure while at the same time not buying American. Instead, the airline's chief executive recently indicated that be intends to lease replacement aircraft for several years—in the hope, no doubt, that an improved Mercure with a longer range will become available.

For although Finance Minister Fourcade hinted at the time of his row with Air France just over two months ago that the fall in the dollar might be a major element in the national airline's unwillingness to take the Mercure, the problem is of a more technical nature. Development difficulties have already led to serious production delays and teething troubles, while the aircraft's maximum range of 1,500 km. denies it the flexibility Air France is looking for. Nor is Mercure very attractive from a cost point of view.

France's domestic airline, Air-Inter, is so far the only customer that has been found for Mercure. And even then the French Government has had to resort to both the carrot and the stick because of late delivery and spiralling operating costs. Over the next 12 years the State is to pay Frs.645m. as a subsidy for the 10 Mercures sold to Air-Inter, partly to offset the aircraft's per flying hour cost, which doubled from original estimates to reach Frs.3,000, and partly because of the increased unit price that has resulted from its commercial failure. At first, a single Mercure was to have cost Frs.41m. per aircraft: that figure is now nearer Frs.80m.

Insulated by the success of its military aircraft—and this year French arms sales are expected to increase by £500m., or 25 per cent.—Dassault can ride out its Mercure losses. But Aerospatiale, the French civil aviation leader involved in the equally unhappy Concorde and A 300B Airbus projects, cannot. For 1973 it recorded a loss of Frs. 484.7m., which comfortably exceeded its own issued capital.

Publicity

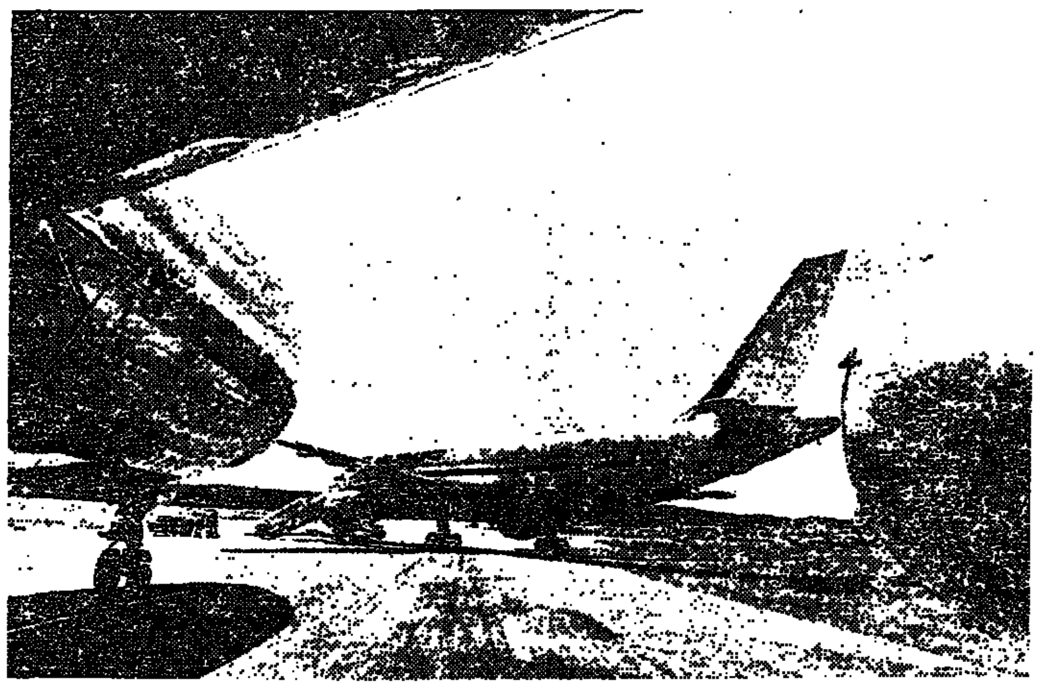
The difficulties surrounding both projects have received massive publicity, but perhaps the full extent of the problem is underlined by comparing Aerospatiale's modest 1972 loss of Frs.13m. with the following year's record deficit. When Aerospatiale revealed the details of its financial troubles last autumn it admitted that during 1973 turnover had grown only six per cent. to Frs.4,255m. and that further Government aid will be needed to keep the company afloat. There also remain serious fears that Aerospatiale's 40,000-strong workforce may eventually have to be trimmed by as many as 6,000 jobs.

Meanwhile, the outlook for both the Concorde and Airbus programmes remains fairly bleak. Given the nine Concordes sold to Air France and British Airways, the remaining six options held by Iran and China have still to be translated into sales. Nor did Chinese deputy Premier Mr. Teng Hsaio-ping's recent official visit to France result in the expected announcement of firm orders for the supersonic carrier.

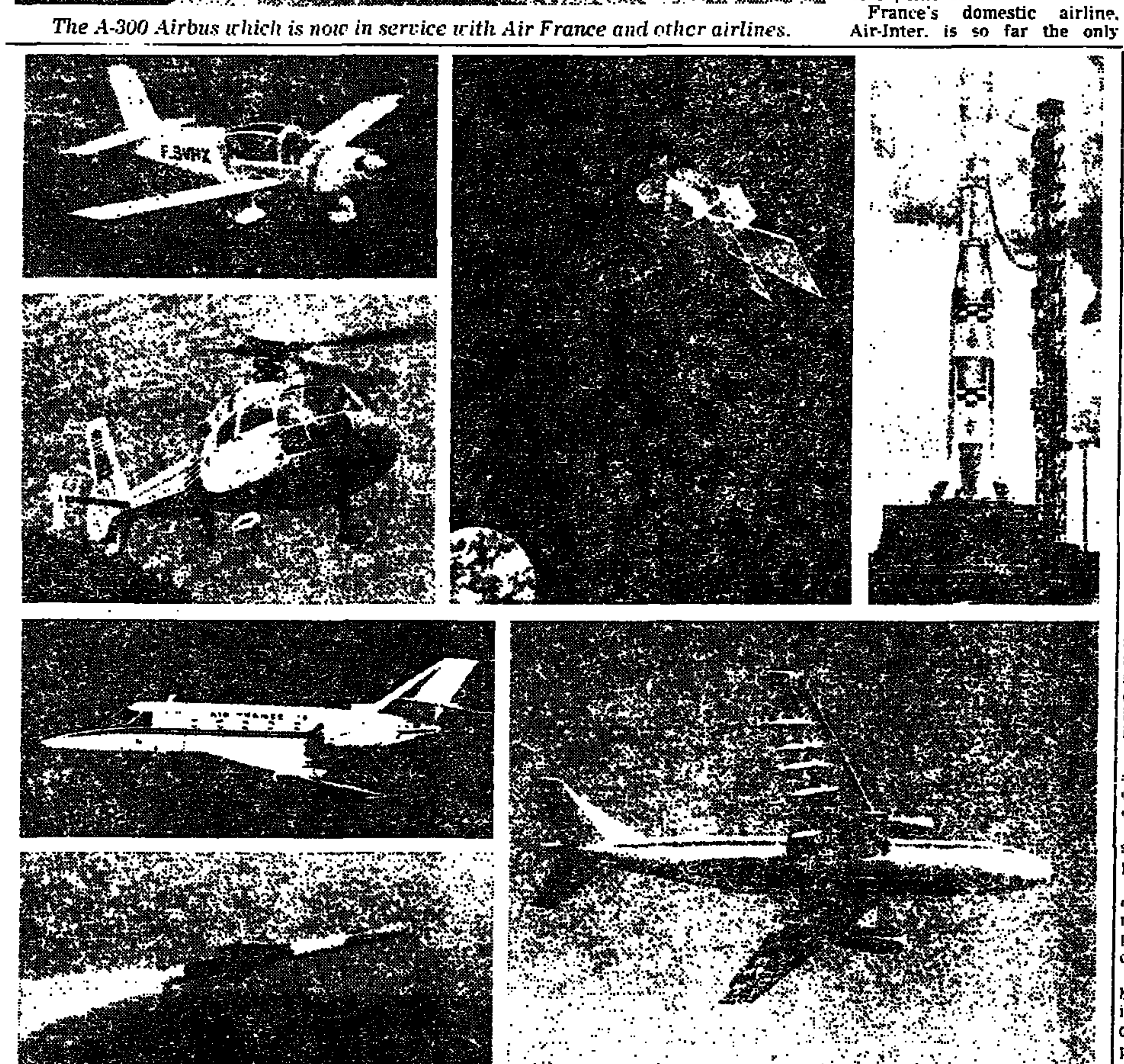
On the Airbus front, Air France has found that since introducing the wide-body aircraft on some of its European routes it has been forced to slash the number of in-flight hours it can afford when competing with the smaller aircraft operated by competitors. And with Spain's national airline Iberia having finally decided last year to buy 27 Boeing 727s rather than the Airbus, France now remains the only member of the five-nation Airbus Industrie European consortium to operate the aircraft. The only positive development has been Air India's decision in January to complement its Boeing 737-200 fleet with three Airbuses, while taking out options on a further three.

Prestige projects are not the only sector of the French aerospace industry to be beset by difficulties. Light aircraft, an area in which France has become the European leader during the past five years, has also suffered from the general economic climate. Last year sales of light aircraft dropped 20 per cent. with only 900 units sold by the eight main producers, as against 1,100 the year before. But when compared, say, to Mercure, Concorde and Airbus, the French light aircraft picture is in a quiet way as bright as that for military aircraft, with 66 per cent. of 1974's Frs.135m. sales going for export.

Giles Merritt



The A-300 Airbus which is now in service with Air France and other airlines.



State of flux in West Germany

WEST GERMANY'S small aerospace industry stands poised somewhat uneasily between idealism and reality. Its ideal would be to play a useful part in a European aerospace programme that distributed well-co-ordinated projects among a number of permanently established multi-nation groups. The reality consists of ad hoc international co-operation on large but intermittent military and civil projects, each of whose success is very sensitive to political or economic trends.

Although the turnover of the industry expanded quite fast during the seventies, rising from DM2.9bn. in 1970, to DM3.9bn. in 1973, and an estimated DM4.0bn. last year, the expansion has been overwhelmingly due to the spending of the West German Government. The Government now feels that this brand of growth has gone far enough, and its current plan, pending a rethink on the future course of the industry.

The Government last year appointed Martin Gruener, a Secretary of State in the Economics Ministry, as a new co-ordinator of the German aerospace industry. The fact that he was given this problematic assignment was symbolic of the Government's disappointment with the progress towards European integration in the industry. There was no sign of the ad hoc get-togethers developing into stable and long-term relationships. There was no sign of the companies forming permanent cross-frontier links. Fundamental to these disappointments, there were only feeble signs of Governments wanting to co-ordinate their aerospace policies and their research programmes.

The German Government's latest "basis programme" for the German aerospace industry was presented last winter. It still contains large elements of a European creed, but this time studded with observations of disappointment. In formulating its aims in the period 1974-78 it states:

1—Europe must have an aerospace industry for reasons of defence, foreign policy, and economic development.

2—If this industry is to be successful West Germany must play a part in it.

3—The industry currently consists of companies that are too small employing too many people and doubling up on each other's efforts.

4—The European market is big enough to provide the initial sales basis for the development of new aerospace products: and

5—Government spending on aerospace projects is already threatening to strain national budgets.

Vague

The Government then says that its aim is to preserve the German aerospace industry in a state in which it can join forcefully in any programme of European co-operation. In the meantime, the aim of its aid will be to develop and consolidate Germany's aerospace industry on a national basis. The Government intends to cut down the research and development aspects of the industry's turnover and to try to force the pace in production and sales. The basis programme is vague as to how this will be achieved. Herr Gruener's task is to clear up the vagueness.

The Government's spending of DM3bn. a year for the next three years is divided into four areas: pure research, civil aviation projects, military projects, and space projects. Spending in the first of these categories will amount to DM50m. or DM60m. a year and will be appropriated by the Research and Technology Ministry. The Government's spending on civil programmes will mount from DM240m. in 1974 to DM350m. in 1978. It will be devoted to the development and marketing subsidies for the two major civil projects involving West Germany—the A-300 Airbus and the VFW-614 shorthaul jet being constructed by the German-Dutch consortium VFW-Fokker.

Military expenditure will run at some DM2.5bn. a year and will be concentrated on the Multi-Role-Combat-Aircraft (MRCA), an Anglo-German-Italian joint project, and the Franco-German Alpha-Jet trainer. These aircraft are not yet officially cleared for production but the odds are that they will both be produced and compensate the German industry for the running-down of the "Transall" transport aircraft programme, the CH-53 helicopter programme, and the F-104 Starfighter programme.

Financed

Government support of the space programme is financed through the Research and Technology Ministry and will continue to run at between DM300m. and DM350m. a year until 1978.

The programme will aim at developing the peaceful uses of satellites, at co-operating with U.S. in developing the idea of manned space flight using re-usable vehicles (Space Shuttle), and at using space conditions for industrial processes.

The West German aerospace industry now consists of three companies employing 50,000 people, compared with the 100,000 that work in the industry in France and the 200,000 in the U.K. The industry is only 20 years old, for it was only in the mid-fifties that it was allowed a rebirth after its total suppression in the wake of the world war. In that time the natural talent of the Germans for innovation and precision engineering has brought the industry back up to world standard. Not only have the old skills re-emerged but they have done so under the old names, with the two wholly-German companies being called Dornier and Messerschmitt-Boelkow-Blom.

MBB is the largest of these with a turnover last year of DM1.4bn. after DM1.2bn. in the previous year. The company has yet to announce whether it made a profit in 1974: in 1973 it reported earnings of DM7.3m. MBB is heavily dependent on the success of the A-300 Airbus and the MRCA. The Airbus is a five-nation project in which the company Deutsche Airbus has a 47.9 per cent. stake. Deutsche Airbus is, in turn, owned by MBB as to 65 per cent. and as to the rest by the Dutch-German company VFW-Fokker. The Airbus is already in service with Air France and the construction consortium has now achieved 48 sales. The aircraft is now hindered by the general world recession from achieving the sales breakthrough it needs to become a commercial success.

MBB is involved in the construction of the MRCA through its 42.5 per cent. holding in Panavia, the British-German-Italian consortium that is building the machine. The last official estimate for the cost of this aircraft was DM21m. apiece. Britain's original requirement was for 385, West Germany's for 322 and Italy's for 100. So far the project has gone reasonably well and has, despite delays and the inevitable escalation in cost, survived the "check-points" that are supposed to ease the cancellation of a multi-national project whose difficulties have got out of hand.

Apart from its role in these two projects MBB is a successful helicopter constructor. It sold 67 BO-105 multi-purpose helicopters in 1974, bringing the total sold to 180. It also makes the "Roland" anti-aircraft missile, the "Milan" anti-tank missile, and the air-to-ship missile, "Kormoran." Finally it is involved in the satellite business and in the development of new systems of rapid-transport and urban-transport.

The other wholly German aerospace concern is a private company, the Dornier Group. Dornier's turnover in 1974 was DM520m., up from DM489m. in the previous year. The company has yet to reveal its profit or loss figure for the year. Aircraft projects account for about half of the company's turnover, space projects take another fifth, and special projects with engineering the rest. The whole group employs around 7,000 people.

The company has been successful with its two-engined utility aircraft, the Sky Servant, and it is now poised at the start of its most important project to date, the Alpha jet trainer. It is developing this aircraft with Avions Marcel Dassault/Breguet Aviation of France. The two-jet aircraft has just received clearance for the pre-production run and if it goes ahead as expected it should bring Dornier some DM500m. of orders between 1976 and 1980. The aircraft will go to the West German, French and Belgian air forces as a trainer and close-support plane. Dornier's other important prospect is its participation in the VFW-Fokker/Erno Group which has won the contract to build the European manned orbital laboratory at a cost of some DM600m.

The third West German aerospace activity is the German-Dutch company, VFW-Fokker, which was formed by merger in 1969 after nine years of increasing co-operation. Total sales last year were DM1.4bn., virtually unchanged from the figure in the previous year. There are currently 18,000 workers on the joint company's payroll. VFW-Fokker's major new project is the VFW 614—a 44-seater jet with a range of 1,200 kilometres. This is another passenger aircraft project that is hanging fire because of the slack state of the world economy. So far VFW-Fokker has obtained 10 firm orders and 25 options. It needs to sell a considerably greater number to break even.

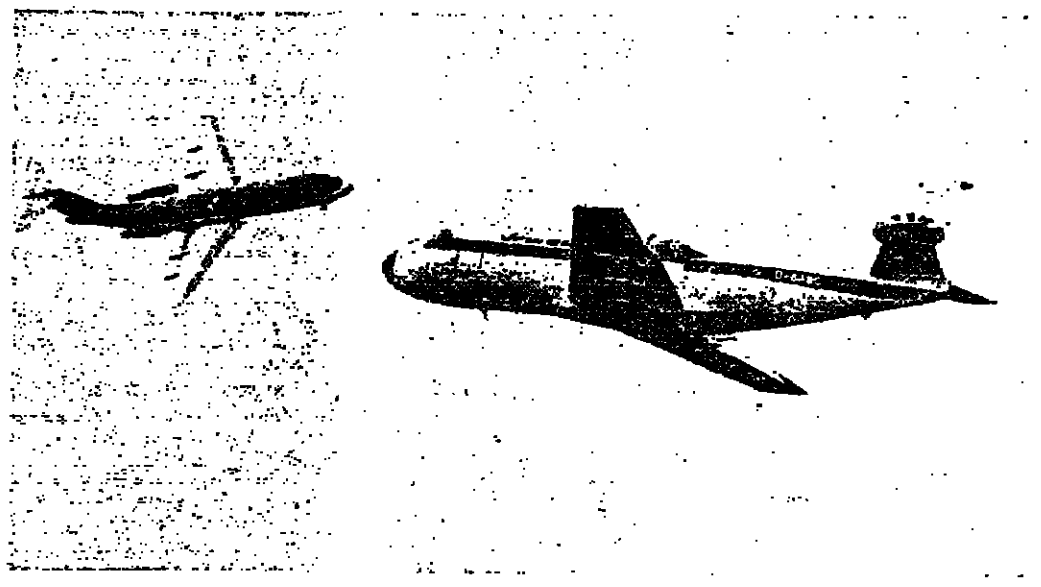
VFW-Fokker also holds 35 per cent. of Deutsche Airbus which co-ordinates West Germany's involvement in the Airbus project. Its key involvement in space travel is through its subsidiary Erno-Raumfahrt Technik. This company last year won the contract for the development of the European manned orbiting space laboratory and the company will be co-ordinating production in many European countries.

Nicholas Colchester

Dutch space success

WHILE THE first Dutch satellite is still successfully orbiting the earth carrying astronomical research, the Dutch Government has decided to allocate an initial sum for a new space project. The sum involved, Fls. 3.4m. is for a tentative design study for an infra-red measuring astronomical satellite (IRAS).

The sum allocated is still small but it does at least provide an indication of the Government's intention to remain involved in space work and high technology, something that had been subject to some doubts in the past. The Ministry of Economic Affairs is currently preparing a White Paper on industry which will outline the Government's thinking on future industrial development in the Netherlands. That paper, too, is expected to confirm continuing interest in aerospace activities.



The VFW-Fokker F-28 (left) circles behind the new VFW-Fokker 614.

The work on the IRAS study will provide more work for those involved with the current ANS astronomical satellite, filling up some of the capacity now that that project is more or less completed. The ANS operations have been extended until October and the necessary funds are freed until then. On the basis of the results in the coming few months the decision will be made whether to extend operations until November, 1976, the expected end of the satellite.

The ANS satellite was launched last October in California with the aid of NASA and is now being guided and monitored by the European Space Operations Centre (ESOC) in Darmstadt, Germany. Apart from three measuring instruments, the satellite is entirely Dutch-made and the two companies involved in the two projects, which have added much prestige to the Dutch space technology effort, are VFW-Fokker and Hollandse Signaal, which is a subsidiary of the big Philips electrical group.

A second development, one of very great importance, particularly for the Dutch arm of the VFW-Fokker concern in Schiphol, is the decision on the replacement of the ageing F-104 Starfighters in the air forces of Holland, Belgium, Denmark and Norway.

According to the latest reports, the Dutch Cabinet is expected to make its decision known before the end of this month. All indications are that it will select the U.S. General Dynamics light-weight fighter, the F-16. It has made the selection on the basis of technical and general capabilities and costs rather than the offset arrangements offered which are said to be somewhat less attractive than that offered by the SAAB and Dassault competitors.

Controversy

A decision of very wide economic, financial as well as international political importance, it has also been subject to controversy in Holland itself. This did not so much concern the varying and sometimes conflicting demands from ministries such as the Ministries of Economic Affairs, Foreign Affairs and Defence, but the Starfighter decision had threatened for some time to split up the dominant Labour Party (PVDA) in the centre-Left coalition Cabinet. A major part of the Labour Party had wanted a cheaper and less versatile aircraft and a study of planes such as the U.S. Tiger and the Anglo-French Jaguar. These demands were swept aside by Defence Minister Mr. Henk Vredeling, however, who said that such aircraft did not meet the necessary requirements.

There has also been a persistent rumour in Hague Government circles that Mr. Vredeling has presented the other Cabinet ministers with some sort of a compromise. This would be the purchase of some 20 fewer aircraft from General Dynamics than the planned 102 (total contract value Fls.2.3bn.). It would allow more time to study the possibility of a future European aerospace industry. However, whatever aircraft is finally picked, much of the offset work will go to Fokker in Schiphol as the Dutch arm of the German-Dutch aerospace concern VFW-Fokker. The concern certainly needs more work in the military sector. The work load in the civil sector is very satisfactory though there are distinct worries about sagging margins as a result of increasing efforts to maintain market shares in the face of sharply rising competition, notably from U.S. aircraft manufacturers.

Fokker recently announced it was building a new version of the F-28 jet passenger liner. It could carry 85 passengers and has been designated Mk-4000. The aircraft, which would appear to underline Fokker's confidence in the future, is said to have created plenty of interest among the operators.

The MK-4000 is basically the long-bodied MK-6000 without the leading-edge slat and its engines will again be supplied by Rolls-Royce, which is Fokker's exclusive power plant supplier. Sales of the turbo-prop F-27 and the F-28 jet passenger liner are developing rather well, a Fokker spokesman said in Schiphol. No less than 629 F-27's have been sold so far (the break-even point was about 125) and some Fls.60m. has been paid to the Government in royalties, which is 190 per cent. of the sums advanced many years ago for the project. For the F-28, Fokker said the advances had totalled Fls.145m., of which Fls.20m. has been paid back. Sales have reached 106 now but it is understood that the break-even point has been put back to 240.

The company said that whereas F-27 production was running at a rate of only 0.5 a month a few years ago and it considered ceasing production altogether, output has now reached 1.5 a month which would be pushed up to 2 in 1976. For this aircraft, Fokker was now actively looking at new markets such as maritime reconnaissance and fishery protection. As for the F-28, production which still ran at one a month two years ago will be doubled by 1977. On the whole, Fokker aircraft have benefited from the aftermath of the energy crisis and the fact that they are relatively versatile and popular for regional airline services. The company has achieved many sales in developing countries and the Middle East, too.

Fokker is now recruiting new personnel and despite the many re-training schemes and increased capacity at the training school, there is still a shortage of skilled labour. A number of people had to be recruited from neighbouring countries, including Britain. Once the Starfighter replacement programme gets under way, there are likely to be more staff problems if Fokker is unable to meet the increased labour demand itself.

Sales

Although Fokker is optimistic enough about the future of its aircraft business, the group's annual report which is due out later this month is unlikely to show the much-needed rise in profits. In 1973, the profit-to-sales ratio had reached a low of 0.6 per cent.

Although in technical terms, European aircraft manufacturers can successfully compete with the U.S. manufacturers, the story on the sales side is completely different, for civil as well as military aircraft. U.S. manufacturers have excellent relations with the many international airline companies, but, more importantly, there are added advantages such as the relatively "cheap" dollars, their ability to offer attractive financing arrangements with the aid of the Export-Import Bank and, in a way also, the U.S. import duties on non-American aircraft. Exports from Holland as well as Germany are already being affected to some extent by their hard currencies.

Not surprisingly, there was one report which circulated here recently which was that Fokker was planning to make representations to the Dutch Government for some form of aid, possibly along the lines of the Ex-Im Bank. It is ironic that whereas there are reports of Fokker's sales successes, the company is in fact struggling very hard to make money out of those sales.

Michael Van Os
Amsterdam Correspondent

Italy seeks partnership

IT IS NOW four years since the Italian Government decided in principle that the development of a national aerospace industry capable of participating as a viable partner in international joint ventures was an indispensable part of Italy's overall industrial growth strategy for the second half of this decade and into the 1980s. This belief that aerospace, alongside electronics and nuclear engineering, were key areas in which no industrial country could afford to be absent led initially to the creation of the Aeritalia through the merger of the non-engine aerospace activities of the Fiat group and the aerospace activities of the IRI/Finmeccanica group.

But this declaration of principle and the formation of Aeritalia has not been followed up by the sort of financial and political backing required in the difficult task of building up a viable industry. This situation was underlined recently by Sig. Rinald Piaggio, president of the Industry Association, Associazione Industrie Aerospaziali (AIA), who pin-pointed the absence of an adequate Government aerospace policy and the low level of spending on military aircraft as the principal obstacles to the growth of the industry. In spite of this, however, the industry output rose to over Lire 350b. (£235m.) last year of which some Lire 180bn., or more than half, for export.

Debate

Furthermore, there are now clear signs of a growing political awareness of the importance of the industry. The clearest indication of this can be seen in a two-day Parliamentary debate on the future of the industry, the first which has ever taken place here. The debate, which moved out of the Select Committee stage and onto the floor of the lower House at the insistence of the Communist Party, ended with a large majority decision to vote Lire 150bn. over the next six years, mainly to enable Aeritalia to go ahead with its co-operation with Boeing in the 7X7 project.

This is the core of Italy's civil aircraft ambitions. A new factory is under construction at Foggia in Southern Italy which will give Aeritalia the capacity to produce parts and sub-assemblies in series for the jointly designed 7X7 family which will, however, be assembled, initially at least, in Seattle. But the 7X7 project has had a chequered existence. The original STOL concept has been abandoned in favour of a medium range, 200 seat aircraft offering fuel economy, safety and silence as its principal characteristics. The final shape of the project still has to be defined, however, and the ultimate fate of the project depends on the willingness of the airlines to embark on a further round of heavy investment in new generation aircraft such as the 7X7 family.

Aeritalia itself still has confidence that the 7X7 project will go ahead. Its original 50 per cent. stake has now been reduced to 20 per cent., not by downgrading its original financial contribution but as a result of the expansion of the project from the originally conceived 400-aircraft basis to a theoretical 1,000 aircraft of the type now conceived. Aeritalia hopes that the 30 per cent. left open will be taken up preferably by another European aircraft company or group.

In the meantime, Aeritalia's mainstay continues to be subcontracting work, such as the construction of body panels and tail units for the DC-9 and DC-10 and its military work on the variable wing for the MRCA project, the G-222 military transport, the G-91Y fighter-bomber, and trainer-version of the F-104S. Up to the end of April Aeritalia has produced 643 complete panel units for the DC-9, and 218 tail units and 235 panels for the DC-10. The Turin plant also produces panels for the Dassault Mercure airliner.

The 44 G-222s ordered by the Italian Air Force last year came just in time to save this project and the first export orders—two for the Argentine Air Force plus an option on a third—have started to flow in. The Turkish Air Force has also bought 18 Lockheed 104s from Aeritalia and has options on another 18, and the Greek Air Force has also shown interest.

Expenditure

But all this, plus the repair and maintenance of Italian Air Force and NATO aircraft, is relatively small beer and Aeritalia's main hopes for the future lies largely in a Government decision on re-equipping the Italian Air Force. A draft Bill is presently under preparation by the Ministry of Defence which calls for the expenditure of Lire 1,265bn. (£850m.) over the next ten years on aircraft procurement starting with Lire 50bn. in 1976, rising to Lire 144bn. by 1979 and Lire 157bn. in the three years 1981-83. The bulk of this expenditure would cover purchases of the Panavia MRCA for which Italy still has to place a firm order. This is the most important single military project in which Aeritalia is involved and Italian participation in the project is clearly linked to the prospect of Italian Air Force order.

Apart from the MRCA the draft Bill covers expenditure on modern radar, low-height missile interception systems, and replacement of the existing fighter and trainer aircraft. Italy's military expenditure is among the lowest in Europe. It has declined from 3.13 per cent. of the GNP in 1960 to 2.7 per cent. now and most of this is consumed in wages, salaries and current expenditure of all kinds. The Air Force, for example, has a mere Lire 80bn. (£55m.) annually for new equipment. This is one of the principal causes of the difficulties faced by the fledgeling aerospace industry. The draft Bill, which is expected to be introduced in Parliament later this year, is an attempt to partially make up for the obsolescence which such a low level of investment has created.

CONTINUED ON NEXT PAGE

Noise now a major issue

OVER THE past few years, noise from aircraft has become a major social and political issue, as communities around airports have become more conscious of their power in dealing with what they rightly regard as a deprivation of their basic right to live—and more particularly to sleep at nights—in reasonable peace and quiet.

Virtually no major international airport in the world is now without some kind of environmental lobby—articulate, well-informed and highly capable of presenting a strong case against either continuation or escalation of the problem of aircraft noise that confronts them every day. In many instances, these lobbies have won notable victories. Had it not been for their pressures, for example, the U.S. Government would not have introduced, through the Federal Aviation Administration, the series of noise restrictions on jet passenger-transport aircraft collectively known as "Federal Aviation Regulations, Part 36" that now effectively govern what kind of noise levels shall be made around airports in the U.S. by subsonic jetliners, and which are widely accepted as a norm in many other parts of the world. Outside the U.S., the world civil aviation industry, through the International Civil Aviation Organisation, has another similar set of guidelines, called Annex 16, which although not mandatory (as is the case in the U.S. of the Part 36 regulations) are nonetheless being applied increasingly in many countries.

Pressures

In the U.K., the pressures from the anti-noise organisations have succeeded—albeit only after a long, hard battle—in getting successive governments to introduce stringent regulations controlling the use of airports such as Heathrow and Gatwick, with the result that jet movements are now severely restricted in the night hours from 2330 to 0600. One of the ultimate ambitions of the noise lobbies is to get night jet movements at those airports banned entirely. In the U.K., the Government has amended the existing noise regulations so that noise certificates are required for newly-produced models of existing types of subsonic jets (such as Tridents, One-Elevens and Boeing 727s) on the British register from January 1, 1976. For older models of these types, hush-kits are either already available (for the One-Eleven, for example) or are under development. In the longer-term, the Government wants to bring into the scope of noise controls all foreign-owned subsonic jet aircraft which are currently outside the existing regulations, by January 1, 1979.

Also in the U.K., efforts are being made to ameliorate noise by so varying the departure paths from Heathrow as to limit it to certain less-populated areas (the so-called "minimum noise routes"); by alternating landings and take-offs on the two Heathrow runways so that those living under the glide-paths have predictable periods of relative quiet; by giving sound insulation grants for homes in the Heathrow and Gatwick vicinities: and by operating "noise abatement procedures" soon after take-off, which are carefully monitored to ensure that aircraft do not exceed permitted noise levels.

At best, however, as the anti-noise lobbies are swift to point out, these are all panaceas for a problem that has existed for a very long time and which is getting worse as the volume of world air traffic rises. The most effective way of preventing noise nuisance to communities, of course, would be to take all airports right away from built-up areas and set them on new coastal sites. The first major attempt to do this, however, with Maplin Sands, failed not only because of the vast scale of cash and other resources that would have been involved in the operation, but also because environmental groups in the East Essex area bitterly opposed having somebody else's problem dumped on their doorsteps. As a result of the Maplin experience, it seems most unlikely that any efforts to build new coastal-sited airports will be attempted in this country for a very long time to come. Indeed, as a result of the combination of the Maplin experience, the current economic situation, and the decline in the rate of U.K. growth of air traffic, together with environmental objections, it seems highly unlikely that any new airports will be built anywhere in Britain at all for the foreseeable future, with the result that the air transport industry and the community will have to make the best of what they have now got, in every kind of way. This will almost certainly mean a slow but inexorable spread of existing environmental noise controls at Heathrow and Gatwick to include virtually every other airport in the U.K. It will also mean a continued pressure from the lobbies round the major airports for even more stringent controls. It must be recognised by all involved in aviation that this is not a problem that will go away, but rather one that will get worse as time goes on.

Fringes

The point that needs to be recognised most of all, however, is that all of the efforts made hitherto to get aircraft noise under control round airports they are only tackling the operational fringes of the problem. The real answer to cutting aircraft noise is to design, develop and manufacture in substantial quantities a wide range of new types of engines, embodying all the techniques now available for getting noise down and even if necessary making a quantum jump into the future by anticipating the almost certainly more stringent anti-noise legislation that must come. Expenditure now on new quiet-engine programmes, going well beyond the achievements of even the Rolls-Royce RB-211, will be an investment that will be rewarded many times over in the future. This is already being done, for example, by General Electric and Snecma of France with the new CFM-56 and by Pratt and Whitney JT10D, both of which are in the so-called "10 to 15 tons thrust class," and are intended for the next generation of medium-haul airliners.

From the air transport industry's point of view, the effect of the legislation in the U.S., where most of the world's jet airliners are built, has been that jets now rolling off the production lines are significantly quieter than their predecessors. It is recognised, for example, that airliners such as the Lockheed TriStar and McDonnell Douglas DC-10 are much quieter than the earlier Boeing 707s and Douglas DC-8s. The manufacturers and the airlines have undoubtedly taken the noise problem seriously, and have spent and are still spending many millions of pounds on noise reduction research and in production of both quieter new engines and "hush kits" which can be retrofitted to older generations of engines (admittedly with some weight and/or payload penalties) to make them quieter. As a result of all this work and expenditure, much more is now known about aircraft noise, and the options that are available to reduce it, than a few years ago.

As a result, several further developments are now in prospect, aimed at getting aircraft noise levels down further. Once again, the U.S. appears to be spearheading the attack, at least in terms of regulatory procedures. One of the most significant of these appears to be the plan to introduce what are known as Fleet Noise Requirements—a scheme whereby the noise level of an airline's entire fleet is required to be reduced to a certain level. The details of the scheme, spelled out in a "Notice of Proposed Rulemaking 74-14," include the provision that no domestic or foreign airline will be allowed to operate any aircraft unless one-half of its engines meet the FAR Part 36 noise levels by June 30, 1976, with all its aircraft being obliged to meet FAR Part 36 levels by June 30, 1978. These rules will cover all subsonic turbo-jet aircraft weighing more than 75,000 lbs., and all U.S.-registered aircraft and foreign aircraft operating from U.S. airports.

These proposed new regulations gave rise to an extensive research programme in the U.S. to devise techniques of retrofitting noise reduction devices to many of the older Boeing 707 and DC-8 jets, for example, which would be brought within the scope of the rules. Inevitably, the proposed regulations gave rise to strong complaints from the airlines and the manufacturers, who claimed that the retrofitting cost of the older jets would amount to about $1,000m. It was—and is still being—argued that the finance for such a programme should come from both the users of air transport (probably through a levy on air tickets sold) and the general public, if they wanted quieter jets and airports, and that there ought also to be some kind of international agreement on the whole retrofitting issue, since many foreign airlines were involved employing older-type Boeing 707s and DC-8s, Boeing 727s, Boeing 737s, and Douglas DC-9s.

Deadlines

Another problem associated with this so-called retrofitting programme is its time-scale. It has been suggested that the proposed deadlines cannot be met, simply because of the manufacturing problems involved. It has been estimated, for example, that even if a go-ahead were possible this summer, it would not be possible to produce the necessary kits and instal them on all the aircraft using JT8D engines until about 1980 and on all the much older JT3D engines until about 1983. It would seem, therefore, that before the U.S. goes ahead with this retrofitting programme, some modification will be necessary.

The point is also made strongly by airlines and manufacturers that the economic penalty involved in retrofitting many of those older jets will not be justifiable, since many of them are regarded as "thirsty" engines in to-day's environment of fuel restrictions and high fuel costs, and many of them are also nearing the end of their safe fatigue lives, so that they will be phasing out of service increasingly in the years ahead, with many of them going to the scrapyards.

Arguments

While the arguments about retrofitting continue, the major jet builders, Boeing and Douglas, together with the major engine builder, Pratt and Whitney, in conjunction with the National Aeronautics and Space Administration and such airlines as United and American, have been engaged on another noise-reduction research programme, known as refanning, using the JT8D engine as a research vehicle.

By using a larger and quieter single-stage fan, and making other modifications inside the engine, it has been found possible to cut down the velocity of the jet exhaust and so reduce "jet noise," while by also introducing sound-absorbent materials inside the engine it has been possible to damp down "machinery" noise. The result is a significant reduction in overall engine noise. The problem with the "refan" programme, however, is that it cannot be used for any "retrofit" programme, simply because of its cost. Boeing believes, however, that it does offer attractive potential for JT8D and other existing types of engines, should these be required for entirely new types of aircraft in the future. This will help to meet yet another impending requirement in the U.S.—a further reduction in Part 36 engine noise levels for all new types of aircraft certificated henceforth.

One other area of noise reduction that is being explored in the U.S. is called the "two-segment approach"—a technique whereby an aircraft approaches an airport on a steeper (six degrees) glide-path than at present, flattening out to a normal three-degrees glide-slope when closer to the runway threshold. This technique has been test-flown in the U.S. by United Airlines, and is regarded there as being safe, but it is not accepted in the U.K. either by the Civil Aviation Authority or the British Air Line Pilots' Assocation as an acceptable means of noise-abatement, and on present thinking it is accordingly not likely to be used here.

Michael Donne

Italy

CONTINUED FROM PREVIOUS PAGE

One military project which is not going ahead meanwhile is the Lancer project put forward by Lockheed but not accepted by either the U.S. or the Italian Air Forces.

A field in which Italian industry continues to expand and do very well in export markets is that of helicopters. But one of the mysteries of the Italian structure is that the dominant role in this sector is exercised not by IRI, which has 50 per cent. in Aeritalia through Finmeccanica, but another state holding company, EFIM, which is the controlling shareholder in Costruzione Aeronautica Giovanni Agusta and major shareholder in Breda-Nardi and SIAI Marchetti, the other major helicopter groups. The logic for this is not industrial but the consequence of domestic political infighting between the various factions of the Christian Democrat Party which has plagued so much of Italian State enterprise in recent years. But the State industries are now under close scrutiny and pressure is mounting for rationalising the structure. This might eventually lead to closer co-operation between Aeritalia and the helicopter groups.

Agusta has produced Bell helicopters under licence since 1952 and also has licence agreements with Sikorsky and Boeing Vertol. It has produced 3,000 units so far ranging from tiny one-man crop-sprayers to the massive Boeing Chinooks. The experience gained in this way has now permitted Agusta to produce its own helicopter designed specifically for civilian rather than military use. This is the twin-motor Agusta 109 which carries eight people at 150 knots and has a range of 600 kms. This is the result of a careful market research effort among potential civil customers and has already resulted in many export inquiries and the first-ever sales to the U.S., the undisputed masters of helicopter technology.

Agusta employs over 7,000 people and is far the largest company with a cluster of factories near Milan and a new plant at Frosinone, Elicotteri Meridionale. Breda-Nardi produce mainly under Hughes licence. Italian light aircraft, such as the Airmacchi MB-326, have also done very well in export markets and Macchi is now preparing a successor model in the MB-339, but once again the future of this project depends largely on winning orders from the Italian Air Force.

Headway

Another field in which Italian companies have made headway is in the missile field, with several foreign air forces and navies in particular showing great interest in the new OTAMAT missile produced by the arms company OTO Melara at Leghorn, while in the avionics field and in electronic control systems for air traffic Italian companies are also active, with Selenia, for example, just reporting a $9m. order to supply air traffic control systems at three Turkish airports.

At this stage the Italian aerospace industry cannot be said to have fully taken off. But its ambition to become a viable partner in European and U.S. joint ventures remains and appears to have obtained a greater degree of political consensus than appeared likely one year ago.

Anthony Robinson

What the City makes of the Market

BY MICHAEL BLANDEN

THERE is little evidence that any of the main City institutions—the insurance companies, the banks and the Stock Exchange—have so far gained a significant direct benefit, commercial or financial, from British membership of the EEC. In some ways, the experience of the past two years has therefore been disappointing. Progress towards the unification of the European markets and free competition for financial business has been slow, while ideals of monetary and economic union have suffered a major setback.

Again, in terms of the contribution made by European business to U.K. invisible earnings, although precise figures are hard to come by, the signs are that income has grown no faster than invisible trade with the rest of the world. Business in Europe has, it is thought, continued to provide between *15 and 20 per cent. of the total.* While a good deal of attention *has been paid to developing* new contacts and relationships within Europe, the City has maintained its world-wide outlook. The U.K. banks, for example, have been building up their operations in North America at least as rapidly as in Europe.

Euphoria

Nevertheless, the City institutions are *firmly in favour* of continued U.K. membership of the Community. The euphoria with which the prospect of EEC membership was greeted three or four years ago, when there was *fairly* widespread talk of London's taking over as the banking and insurance centre for the whole of Europe, has been dampened by experience *and by a greater degree of* diplomacy in dealing with the sensibilities of the U.K.'s European partners. But there is a remarkable degree of unanimity within the insurance industry, banking and the Stock Exchange that withdrawal now would be a disaster both for the country as a whole and for the continued international strength of the City.

This has been clear from the public statements put out by the various representative institutions as well as from private conversations with a number of senior individuals. Even those who might have had some reservations about the initial decision to join the EEC have generally become convinced that to leave now would have serious adverse effects—in particular, that confidence in the country's ability to meet its commitments would be damaged.

Regulations

The conviction may also derive in part from the amount of work done by a number of people in the City, over the past two or three years in organising and influencing proposals for harmonisation of rules and regulations within the EEC. It is felt that substantial progress has been made by the U.K. in bringing about a more liberal and outward-looking EEC approach to these issues, and the people involved clearly *have a commitment to seeing* that their work is not wasted.

Fundamentally, however, the City support for the EEC rests on the conviction that its own activities, as well as the strength of the country, would be seriously damaged by withdrawal. Immediate advantages, most City people will agree, are not easy to find, and there is little *prospect of a large upsurge in* business for the financial institutions. But in the long run, it is argued, the City will lose if the U.K. economy is weakened further—as it could be, it is felt outside the Community—while if there should be some real progress towards monetary unification of the EEC there would be opportunities for a substantial growth of business in Europe.

It has been recognised from the start that there should be considerable opportunities for *all the City institutions* to play an important part in the development of the Community. In insurance, the British companies and Lloyd's between them have made London the undisputed insurance centre of the world. A background of liberal official regulation has enabled the industry to develop its extensive international as well as domestic business with little hindrance.

This provides a considerable contrast, it is argued, with the more restrictive and legalistic approach to regulation adopted *in many Continental European* countries, where insurance operations tend to be predominantly domestic in character. The strength of London's insurance market should be able to make an important contribution to the development of the Community.

Eurocurrency

In banking, an open and *liberal* regulatory authority has enabled London to establish itself as a major international financial centre, on the basis not only of the country's own large domestic and international banks but also of the extensive *and still growing representation* of foreign banks in the City. It has become the main centre of Eurocurrency operations, which in the absence of European unity still represent the only real international capital *market.*

> "Our overall economic security as a nation can now best be safeguarded by concerted action with our Community partners, and there is no viable alternative."
>
> SIR JOHN PRIDEAUX, CHAIRMAN OF NATIONAL WESTMINSTER BANK AND OF THE COMMITTEE OF LONDON CLEARING BANKERS

In stock market terms, the Stock Exchange operates on a scale unmatched in the rest of Europe. Its turnover is comparable in size to the rest of Europe's bourses put together. In building up an international dealing network in Europe, therefore, there should be a chance for London to play a leading role.

These advantages and opportunities have, it is true, become less marked during the past two years. The weakness of the U.K. economy has not helped. The collapse of the stock market last year and the problems of brokers and jobbers have reduced confidence in the system. The problems of the secondary banks and the evident need for stronger supervision in that sector, as well as the moves towards stricter control of the insurance industry, have reduced the strength of London's case for self-regulation and maximum freedom of operation as against Continental regulatory systems. At the same time, the London institutions have become aware of the need to tread fairly delicately on the Continent, where people are naturally sensitive to high-pitched claims that London is going to take over as the major centre, and of the considerable obstacles to extensive development in Europe.

Nevertheless, progress has been made in developing a Community atmosphere in London *and in building the basis* for a more active role in future. The Stock Exchange, for example, held a conference in Brussels shortly after the U.K. accession to explain its operations to Continental investors—a very necessary function because of the different market structure in London and the strict rules imposed on listed companies under the Exchange's regulations.

Listings

Efforts have been made, with some success, to elucidate the London listing requirements for Continental companies, and several have arranged to be quoted in the U.K. London, it is claimed, now provides the second most important market in French and German securities. In the other direction, U.K. companies have been obtaining listings in Continental centres. Several firms of *London jobbers have begun to* make markets in a range of Continental equities, achieving at times a fair amount of trading. The Stock Exchange itself is collaborating with Continental bourses in such areas as communications networks.

Similarly, in insurance and banking there is no doubt that membership has concentrated the minds of management on the opportunities in Europe and on the need to build up representation there. While continuing with their general international business, insurance companies have arranged strong Continental links, such as the purchase of Delta-Lloyd in the Netherlands by Commercial Union. The banks have been building up their representation in Europe as part their general efforts to increase their international coverage. The European feeling has come out most clearly, in those banks which have been part of an EEC-oriented grouping.

Midland provides the main example with its connections with leading Continental banks through the European Banks International Company. This group has formed the main basis of Midland's overseas representation—including the recent joint acquisition of the Franklin National business—and its philosophy and origins are very much geared to the Community concept and the distant prospect of much closer co-operation in a future unified Common Market. Similar thinking lay behind the decision last year by Barclays to link itself with the Abecor grouping of European banks.

But it is in the committees and consultation groups where the City feels that much of the best and most fruitful work has been carried out in the past two years. *These have been* slow to produce results; but their effect on the ultimate aim of opening up the EEC to free competition could be substantial. The influence of the City has tended to be strongly against excessively restrictive legislation and rules, and in favour of flexible controls combined with an open approach influenced by the importance to London of its insurance and banking activities outside the EEC and of the large foreign banking community in the City.

While trying to protect these interests, the U.K. has had to recognise the inevitability of some form of tighter controls over the activities of, for example, banks. There is no doubt the City has been influenced in this by the weaknesses in its own system thrown up by the fringe bank collapses. Two achievements in this area can be singled out.

One is in the regulation of banking activities. Harmonisation in this field has been slow, because the initial effort to find a basis for it, in the original Commission proposals for detailed rules based on existing national regulations, came up against strong opposition not only from the U.K. but also from other countries. The new directive which could be adopted by the end of this year, adopts a far more pragmatic approach to the problem, attempting to set out basic principles of regulation while providing for future regular contact aimed at bringing the rules closer together. It would require the U.K. to adopt a positive system of bank licensing, and is far more acceptable in London than the previous efforts.

Secondly, there have been the efforts towards free competition in insurance. Progress has again been slow, but a directive has been agreed on *the right to freedom of establishment* in non-life business and should be effective by February next year. Subject to national rules on solvency margins this will give insurers the opportunity, in principle at least, to establish branches in other member states. Directives on *freedom of establishment for* life business (next on the list for action) and of freedom of service in non-life business (most important to Lloyd's as giving the right to do business across national frontiers) are *also in draft form.*

Solvency

There are major problems in the way of further progress, including technical issues like the level of solvency margins to be enforced and the confusion caused by recent European Court revisions. Nevertheless, the U.K. industry feels that it has achieved a great deal by getting the proposed rules to acknowledge the special *character of Lloyd's*— a unique institution which could benefit in, for example, the German and Italian markets—and in keeping a reasonably liberal approach.

This work is one of the reasons frequently cited for wanting to remain in the EEC. The City feels that outside, it would lose its influence on the future development of the Community, running the risk of being increasingly cut off from this market and conceivably from other countries in the developing world which could adopt a similar approach to legislation affecting the City. It also feels that the contacts developed have done a great deal already to overcome the wide differences of outlook between London and many Continental centres, to the benefit of both.

Letters to the Editor

Taxes on gains

From The Chairman, The Stock Exchange.

Sir,—Having seen your report of May 22, I would like to set out my Council's position.

We already have a short-term gains tax which is quite high *enough. If the Government* retains capital gains tax, the Stock Exchange advocates a graduated tax with the rate reducing and finally disappearing according to the length of time investments are held. The Chancellor has stated publicly that he is considering these proposals.

Our evidence to the Parliamentary Committee considering the wealth tax contained the following statement:

"The Stock Exchange would endorse the plan, flatly rejected *in the Green Paper, that the* investment income surcharge should be abolished with the introduction of the wealth tax. The 2 per cent. transfer stamp duty should also be removed completely or at least harmonised with the EEC proposal to charge transfers at a rate of 0.3 per cent. Capital gains tax, which discourages the shift from a successful to a marginal investment should also be abolished, as gains will be taxed ultimately by wealth tax or capital transfer tax."

I think therefore that the Council's policy on these matters is quite clear.

George A. Loveday.
The Stock Exchange, E.C.2.

Building new homes

From the President, The House-Builders Federation.

Sir,—It is reliably reported that the Government may soon be obliged to stop virtually all new council house building because local authorities may find themselves unable to service their debts which will total some £16.5bn by the end of the year.

As recently as April 30, I warned that council housing subsidies were "one of the fastest growing sectors in the national economy" and further growth in the total stock of council dwellings "could have disastrous consequences for the balance of housing finance in this country." I also said that a mammoth switch away from council housing *towards owner-*occupation would not only save millions of pounds but would do a great deal to restore the foundations of a sound economic policy in this country.

Whether it is the near-bankruptcy of local authorities or political pragmatism, or both, which dictate a halt to council house building is immaterial at this stage of events. The country must be ready with alternative forms of tenure. The private house-building industry which has been functioning at less than half its proven 1972-73 capacity of virtually 250,000 dwellings a year is ready and able to provide new private housing for that 22 per cent. of local authority tenants with household incomes exceeding £3,000 per annum who may be encouraged to move out by the prospect announced by Mr. Crosland of substantial rent rises in the near future, and also for young people prepared to take advantage of the new low-start mortgage scheme, who might otherwise occupy council housing.

With the exception of the cheapest properties, new house prices have been largely static during a 12-month period when the earnings of manual workers have risen by 33 per cent. and now average over £58 a week or £3,016 a year which should qualify them for loans of £7,540. A deposit of modest proportions would thus bring the worker with average earnings into the private market for houses and flats in the £6,000-plus price range. A 25-year mortgage at 11 per cent., without counting tax relief, would cost just over £17 a week which is £2 less than thousands of people spend on running the family car. There would be no charge to the community.

If the house-builder, however, is to gear-up to an immediate programme of this size he will need to be assured of a steady supply of building land. The present prospect is of a land famine within two years, *brought about by the prospect* of Development Land Tax and the Community Land Bill. If the Government were prepared to postpone the implementation of these two questionable measures for a guaranteed period of not less than two years, I am sure the industry would make every effort to produce more than sufficient private houses to make good the expected deficiency in the public sector.

R. M. Willan.
The House-Builders Federation.
82, New Cavendish Street, W.1.

Azad Kashmir poll

From The Press Counsellor, Embassy of Pakistan.

Sir,—Your Asia Correspondent (May 16) has drawn a wholly untenable inference from the results of the general elections held in Azad Kashmir.

His claim that the victory of the Pakistan People's Party in Azad Kashmir "would allow Pakistan to keep in step with moves made in Indian Kashmir" is tendentious. Prime Minister Bhutto has reaffirmed that Pakistan would firmly stand by the right of self-determination of the people of Kashmir and that the results of the general elections in Azad Kashmir would not alter that stand.

It is unfortunate that your Asia Correspondent should have accepted an Indian official's version that, at the Simla conference of 1972, Mr. Bhutto and Mrs. Gandhi "agreed that the *present line of control in* Kashmir should be allowed to become the international boundary line." The text of the *communique* on the Simla agreement clearly states that the line of control will be "without prejudice to the recognised position of either side." Pakistan's "recognised position" is that the people of Kashmir must be allowed to exercise their right of self-determination through a plebiscite as envisaged in the United Nations resolutions.

Abdul Qayyum.
Embassy of Pakistan,
35, Lowndes Square, S.W.1.

U.K. steel prices

From Mr. C. Maxwell-Smythe

Sir,—After reading your article of May 22, I am more than ever convinced that Bob Scholey and his colleagues at BSC are living in "cloud cuckoo land." If Mr. Scholey thinks for one moment that foreign steel producers will raise their prices to keep pace with BSC he is in my opinion sadly disillusioned.

As procurement officer of a company in the provinces I purchase over 500 tons of tool steel a year, and under present conditions I am forced to buy abroad on the grounds of price and delivery. I can negotiate fixed prices for one year and enjoy reliable delivery. Even under present adverse currency exchange rates I can purchase German steel, carriage and duty paid, cheaper than I can in the U.K.

I am gravely aware and concerned of the adverse balance of payments position to which I am contributing, but our products have no chance of competing on the export market by paying U.K. prices and being subject to U.K. unreliable deliveries.

It is worth noting that private sector steel manufacturers in the Sheffield area are at last waking up to the fact that they must *compete with foreign steel suppliers* by bringing prices closer to those of landed imports, and this they are doing. Why doesn't BSC think on these lines with the possibility of creating more work and less redundancy and unemployment?

BSC has clearly decided to take the gamble that if it raises prices in Britain—its foreign competitors will raise their charges too, rather than try to capture an ever bigger share of the market. They must be joking; and if they lose the gamble we will be in a bigger mess than ever, especially as the corporation has almost a complete monopoly in the production of basic ingots and billets.

C. Maxwell-Smythe.
"Cheyney Mews," Butts View, Bakewell, Derbyshire.

Convertible stocks

From The Investment Manager, United Building Society.

Sir,—Since his recent excursion to these shores your correspondent, Joel Stern, has added South Africa's to his list of securities markets which are dominated by "financially astute" investors, in his interpretation of the phrase. He is over-sanguine. The decision makers who dominate investment thinking in this country may well be astute and sophisticated, but their astuteness and sophistication is in the area of mass psychology and not in the rigorous and austere intellectual milieu that is ruled over by Professors Modigliani and Miller.

The South African stock market is characterised by several cases of widely held securities which are as nearly identical as makes no difference, and which consistently trade at materially different prices. In the specific area of convertible stocks, the subject of his article of May 16, the case of South African Breweries convertible preference shares is the most prominent example of the real world thumbing its nose at Chicago logic. These convertibles have consistently traded at a price far too high to be justified either by their value as straightforward preference shares, or as rights to a high interim income followed by an equity right at the appointed date.

I have discussed this anomaly with numerous investment professionals in Johannesburg, and the comment has invariably been that they constitute a reasonable investment at the inflated price, on the basis of the "greater fool" approach. Some of those who have made this comment have been aware of the mathematical paradox; others have not been but most have felt that it is largely irrelevant to the proper assessment of the investment merits of these convertible preference shares.

It should be added that both the ordinary shares and the convertible preference shares of South African Breweries are quoted in London, as are other examples of anomalously priced South African securities. The astute and sophisticated investors who dominate that market have also failed to eliminate the anomaly.

Financial markets with a high degree of theoretical efficiency are patently less common than Mr. Stern believes. "Free lunches" must be commoner.

P. A. Kerbel.
United Building, Fox and Eloff Sts., Johannesburg, P.O. Box 7735.

Spain and Europe

From The Hon. T. Prittie.

Sir,—Your admirable editorial of May 22, pointed-up the advisability of securing Spain's closer association with Nato. Some voices will be raised suggesting that Spain will not be a suitable "partner" for Nato because its system of Government is not a British-style parliamentary democracy. I believe that this sort of objection is utterly invalid.

Political liberalisation began a long time ago in Spain. It is of crucial importance that this process should be allowed to continue quietly, steadily and at a pace consistent with the mentality and the needs of the Spanish people. Any kind of "Portuguese situation" in Spain would be yet another setback to the stability of Europe and the whole western world.

Both Europe, and the rest of the western world, need Spain, as friend and ally, and ever more closely associated with Nato and the EEC. Spain will make her own way, towards internal liberalisation and towards closer association within Europe, at her own pace—and must be allowed to do so.

T. C. F. Prittie.
Britain and Israel.
15, Uxbridge Street, W.8.

Home for the Mayor

From Mr. J. Carolin

Sir,—As a resident of Rio de Janeiro when the British Embassy was built, I was interested in the article, "Home for the Mayor at Last," by Observer in Men and Matters (May 20).

In quoting £100,000 as the cost of the building in the late 1940s, I am afraid that you are very far from the mark. Though I believe that the cost of the land and buildings was very much more than £400,000, I quote from Illustrated of August 26, 1950:

"Amid the palm trees down in Rio de Janeiro is a stately home of England. To build it cost £400,000, three years' work, and the labour of shipping precious antiques 6,000 miles across the Atlantic."

If, however, we accept the figure of £400,000 for the cost, how does this compare with the suggested minimum of £1m, which you mention for offers to-day? Not very much real profit in real terms I would imagine.

J. S. Carolin.
The Vine House, Sevenoaks Kent.

To-day's Events

GENERAL

President Giscard d'Estaing of France has talks with Dr. Henry Kissinger, U.S. Secretary of State, Paris. Dr. Kissinger also attends a meeting of governing body of International Energy Agency in Paris.

World Aerospace and Air Defence Industries two-day conference, organised by the Financial Times, opens, Hotel Meriden, Paris. Chairmen for the first day are: Sir Kenneth Keith, chairman of Rolls-Royce (1971), and Hill Samuel Group, and Mr. Geoffrey Knight, vice-chairman of British Aircraft Corporation.

European Space Agency holds exhibition of projects under development, Paris.

COMPANY RESULTS

C. E. Heath (full year).
William Mallinson and Denny Mott (full year).
Teacher (Distillers) (full year).
Gomme Holdings (half year).
House of Fraser (first quarter).

COMPANY MEETINGS

See Week's Financial Diary on page 4.

CONFERENCES

Association of Teachers in Technical Institutions, Scarborough.
Co-operative Union, Edinburgh.
Footwear and Allied Trades, Eastbourne.
National Association of Head Teachers, Harrogate.

MUSIC

Royal Philharmonic Orchestra, conductor Lawrence Foster, with Pinchas Zuckerman (violin), plays music by Gordon Crosse, Tchaikovsky and Mendelssohn, Royal Festival Hall, London, 8 p.m.

Sylvia Marlow (harpsichord) plays works by Bach, Purcell Room, London, 7.30 p.m.

COMPANY NEWS + COMMENT

Hawker Siddeley Group's outlook

IN THEIR annual statement the directors of Hawker Siddeley Group comment on prospects of the operating units.

Deliveries of Trident aircraft for China against their orders for 35 aircraft continued during 1974, and there are prospects of further orders from the Far East area.

Considerable interest in the Hawk Trainer is now being shown by a number of overseas countries.

While sales of the HS125 and HS748 were somewhat sluggish in 1974, the directors are confident that, as the economic and business climate improves, demand for the HS125 Executive Jet will be re-established. Prospects for recovery of demand for HS748s also look good.

While the economic climate in Australia may have an adverse effect in 1975 on domestic sales of pleasure boats and light aircraft Hawker de Havilland Australia is increasing its sales effort in South East Asian markets.

The directors state much remains to be done before Aberdare Holdings achieves a satisfactory position, but it is expected that the improved trend of 1974 will be continued this year.

Crompton Parkinson took advantage of improved opportunities overseas and 1974 finished with a high order book.

Progress was made in bringing about an improvement at Opperman Holdings, and Hawker Siddeley Power Transformers ended the year with a strong order book.

Demand at Hawker Siddeley Brush Australia is increasing and the outlook for its services remains promising.

As reported on April 25 group pre-tax profit for 1974 was £54.1m. (£49.5m. restated) including Hawker Siddeley Canada, and the dividend is 12.2646p (11.3137p) net per share.

An analysis of capital employed at end 1974 is as follows:

SECTOR ANALYSIS	1974 £m.	1973 £m.
Aerospace engg.	69	66
Electrical	85	67
Mechanical eng. & metals	54	35
Total*	208	168
Hawker Siddeley Canada†	24	22
Total employed	232	190
GEOGRAPHICAL ANALYSIS		
U.K.	175	115
Canada	25	44
Australia	20	21
Africa	8	7
Other	4	3

* Excluding H.S. Canada. † Mechanical engineering.

● comment

The nationalisation cloud over Hawker Siddeley's aerospace activities has not helped the group's share price since the results were declared—it is down from 328p to 284p. And, unless a suitable home could be found for compensation money, the effects would be unhelpful, for the accounts show that the return on capital in aerospace is the highest of any of the divisions at 30 per cent. compared with 13.8 and 24.1 per cent. respectively from electrical and mechanical engineering. But the effects of the £97m. property revaluation increase might give rise to some interesting differences (depending on the impact on individual divisions). The other point is the large rise in stocks and work in progress from £134m. to £201m. and the comparable run-down in liquidity. With a 6.6 per cent. yield, Hawker is still rated as an "overseas earner," but the outlook is problematic—especially since the CCP supplement to the accounts shows that last year's trading profit in real terms was much the same as for 1973.

HIGHLIGHTS

A number of major companies will be reporting in the foreshortened week ahead and most of the news is concentrated on Thursday. On that day **B.P.** is due to announce first-quarter figures while results for the full year are expected from **Courtaulds** and from **Coats Patons**, two leaders of the textile industry. Thursday also bring in results from **Capper-Neill**, **International Paint** and **Robertson Foods** together with an interim statement also from **Associated Engineering**. The first of the major brewers to produce interim figures, **Bass Charrington**, is due to-morrow along with the **Alfred Dunhill** results; and to start the week first quarter figures from **House of Fraser** and results from **Teacher (Distillers)** are due later to-day.

Alginate Industries prospects

SINCE REPORTING the preliminary results of **Alginate Industries** on April 22, when it was announced that first-quarter 1975 sales and profits were up, the chairman, Mr. W. R. Merton, says the decline in orders for export to the textile industry has further intensified and spread to other areas.

It is not, therefore, possible to make a meaningful forecast for the year. But as most export sales are invoiced in either U.S. dollars or local currency, profits are insulated from any weakness of sterling.

In 1974 overseas sales to more than 90 countries accounted for 73 per cent. of sales, a greater part of which was sold to the textile industry.

The textile recession has led to a reduced demand for those grades of alginate, but new applications for alginates are continually being developed and there is scope for wider use of alginates in some existing applications, says Mr. Merton.

Owing to delays in delivery and installation only £1.09m. was spent out of projected capital expenditure of £1.3m. For the current year a flexible approach is being adopted with plans to spend between £1.5-£2m. according to cash resources and probable future sales requirements. Source and application of funds shows a decrease in bank balances of £869,000 (£1,341,000 increase).

As reported on April 23 group pre-tax profit for 1974 was £1.71m. (£0.94m.) and the dividend is 12.5p (5p) per share.

Inflation-adjusted accounts show, on CPP basis, sales £9.43m. (£7.86m.) and pre-tax profit £1.41m. (£1.04m.).

Meeting, Charing Cross Hotel, W.C., June 19, noon.

R. A. DYSON EARNS AND PAYS MORE

Net profit of trailer manufacturers and engineers, R. A. Dyson, increased from £15,532 to £34,995 in the year to March 31, 1974. Earnings per 25p share advanced from 1.55p to 3.5p.

A final dividend of 1.86875p raises the net total from 2.1897p to 2.37125p.

	1974-75 £	1973-74 £
Turnover	1,539,694	1,023,061
Profit	73,578	17,176
Investment income	1,622	1,743
Loss sale secs.	7,607	2,057
Taxation	31,898	1,330
Net profit	34,995	15,532
Dividend	23,712	21,597
Retained	11,283	*6,265

* Deficit.

Owing to substantial increases in working capital due to inflation and the financing of export contracts liquidity moved from a credit of £70,607 to an overdraft of £151,302.

Rise at James Jobling

The Sunderland-based glassware manufacturer, **James A. Jobling and Co.**, report a trading profit of £2.19m. before interest and tax, for the year ended December 1, 1974, compared with £1.85m. for the 48 weeks ended December 2, 1973.

Group sales rose by £7.5m. to £26.6m. and profit after tax and other items increased from £959,000 to £1.06m. Export sales from the U.K. were again a record at £8.29m.

Mr. B. H. Turpin, chairman, says that the trading profit is regarded as satisfactory in the light of the difficult economic conditions now prevailing, but it is still below that of 1970.

The substantial progress made in world markets is particularly gratifying. Although the company's household, laboratory and industrial products are exported to more than 120 countries, sales to the EEC advanced by 110 per cent. in value between 1972 and last year.

The company is a wholly-owned subsidiary of Corning International Corporation of the U.S.

Barton Transport

Reporting a pre-tax loss of £45,054, against a profit of £28,160, for the 24 weeks to March 15, 1975, the directors of **Barton Transport** say it is quite impossible to forecast the outcome of the full year's trading. For the year to September 30, 1974 a loss of £84,617 was incurred.

The 24 weeks' loss includes a surplus on sales of vehicles, and is after associates' share £1,220 (debit £7,495).

Traffic receipts were £1,474,673 (£1,205,900), and the operating loss £107,311 (£76,124).

After a tax credit of £24,062 (debit £12,157), there is a loss of £20,992 (profit £16,453).

Good order books at Portals

IN HIS annual statement, the chairman of papermakers etc., **Portals Holdings**, Mr. J. V. Sheffield, says that in the longer term, the group's knowledge and experience of the essential products and services that it produces and the markets in which it sells, will enable it to expand and flourish.

The papermaking and water treatment divisions have good order books, and there are still good orders from overseas, although activity has been reduced by the recession in Western Europe and the U.S.

Steps are being taken to reduce overheads so as to maintain competitiveness and minimise the effects of the recession on profits.

As reported on May 13, taxable profits rose from £3.89m. to £4.25m. The dividend is 5.084p (4.678p) net.

Turnover was up by some 20 per cent. to £45m. Direct exports increased from £8.5m. to £13m., and the proportion of total turnover generated by overseas activity amounted to some 60 per cent.

A statement of source and application of funds shows an increase in bank overdrafts of £1.84m. (decrease £1.35m.) and a reduction in money at call and bank balances of £771,000 (increase £1.58m.).

As at April 30, the Bank of England held 32 per cent. of the Ordinary.

Meeting, Connaught Rooms, WC, on June 16 at 12.30 p.m.

Chairman's statement Page 11

Downturn for Grant Bros.

After a decline from £89,272 to £73,214 at half-way taxable profit of departmental stores owners, **Grant Bros.** contracted from £272,566 to £228,314 for all the year to January 25, 1975.

Turnover increased from £5.05m. to £5.65m. including VAT of £296,530 (£338,726).

Earnings per 25p share are shown at 7.34p (9.43p) and the dividend is lifted from 3.877p to 3.882p with a final of 2.362p net.

Tax takes £139,964 (£135,501) leaving the net balance down from £134,506 to £88,330.

Tax includes an under provision for the previous period of £10,351. Accordingly earnings per share calculation based on profit for the period are adjusted for the under provision.

Trevor Humphries

Miss Mary Dunhill, chairman of Alfred Dunhill. The company's preliminary results for the year ended March 31, 1975, are due to be announced to-morrow.

Recession hits all parts of Duport

THE RECESSION in demand in U.K. markets and overseas is now affecting, to a varying degree, all parts of the **Duport Group** with little indication of its ultimate extent or duration, says the chairman, Mr. E. C. Sayers.

He points out that the worldwide downturn in trade has created a substantial surplus of steel and the group's facilities have been materially affected.

Significant reductions in customer requirements for the products of the engineering division have, to an extent, been cushioned by the market for agricultural tractors which remains strong, while demand for consumer products from the domestic products division is presently maintained at reasonable levels.

It seems that the present recessional conditions are likely to continue at least to the end of this year and, while steps are being taken to minimise the effects, "a significant reduction" of earnings against last year's record levels is inevitable, says Mr. Sayers.

However, trading results so far support the view that the diversity of the group's interests represents a considerable source of strength and present indications are that the current rate of dividend on the capital as increased by the proposed rights issue will be amply covered.

As reported on May 15 with details of the issue group pre-tax profit increased from £7.49m. to a record £10m., and the dividend is 3.379669p (3.1059p) net per share.

Regarding the announced £25m. expenditure on various projects over the next five years the chairman says price rises have increased the estimated cost of supply cables relating to the steel melting plant at Llanelli to approximately £12m.

Meeting, Birmingham, June 18 at 12.30 p.m.

Reliable Properties

Reliable Properties reports a net trading and revenue surplus of £298,704, against £408,330, for the half-year to December 31, 1974.

However, including interest received of £1,427 compared with £3,106 but after interest paid of £429,453 against £417,163, there is a loss of £129,322 compared with £5,727.

There is no interim dividend. Last year an interim of 0.8375p net was followed by a final of 0.67p. Net profit after tax was £1,247.

Hunting Associated optimistic

IN THE ABSENCE of unforeseen circumstances the directors of **Hunting Associated Industries** expect results for 1975 to exceed those of the previous year; by how much is difficult to qualify, says chairman Mr. L. C. Hunting.

He states that the company's boat building business will undoubtedly be damaged by the 25 per cent. rate of VAT on yachts, but the directors are looking for further improvement from both Canada and South Africa.

Pre-tax profit for 1974 expanded from £1.97m. to £2.46m. and the dividend is stepped up from 1.889545p to 2.047657p.

A percentage analysis of source of Group pre-tax profit and turnovers shows: aviation support 42 (33) and 30 (30), engineering 38 (36) and 38 (same), technical marketing 10 (13) and 8 (10) and survey, consultancy and photographic 10 (18) and 24 (22).

Contributions to pre-tax profit from the U.K. and Canada are both up in percentage terms. In view of the uncertainties surrounding the situation in Rhodesia the directors have not consolidated the results of the Rhodesian subsidiary of Field Industries Africa: the apparent contribution from Southern Africa has therefore gone down.

A statement of source and application of funds shows an increase in bank loans and overdrafts of £619,000 (reduction £435,000) and an increase in cash of £111,000 (£341,000).

Meeting Norwich House, 4, Dunraven Street, W, on June 20 at 12.30 p.m.

Shiloh fares 'better than most'

MR. E. T. GARTSIDE, chairman, of **Shiloh Spinners** says that it is difficult to forecast prospects for the coming year. The trade as a whole is still in a state of severe recession and short-time working is widespread. In this situation the company has fared rather better than most.

With the steps the company is taking to rationalise and modernise its spinning activities and to diversify into other areas, it is in a strong position to continue its growth as soon as economic circumstances permit, he adds.

The company is going ahead with a £500,000 modernisation and re-equipment project in spite of the downturn in the U.K. cotton textile industry.

Mr. Gartside reports that trading conditions were buoyant until the end of 1974 when there was a serious downturn. This was caused partly by a slowing down of industrial activity generally, but more specifically in the case of the spinning industry by a rise in imports of foreign yarn.

As known group profit before tax for the year ended March 29, 1975 was £264,819 (£248,483) and the dividend is raised from 1.5p to 1.636p net.

Referring to diversification, Mr. Gartside says the partly-owned subsidiary Parklite Insulation, showed good growth and W. M. Supplies (U.K.) exceeded profit forecasts.

Meeting Royton on June 18 at 11.30 a.m.

Standstill at MEPC Canadian

Earnings before tax of **MEPC Canadian Properties** advanced marginally from $C2,049,000 to $C2,112,000 for the six months to March 31, 1975. For the last full year the figure was $4,308,000.

	Six months 1974-5 $000	1973-4 $000	Year 1973-4 $000
Rental Income	11,236	10,100	20,917
Dealing Profits	141	249	511
Making	11,497	10,349	21,428
Expenses	8,870	7,850	16,154
Property	4,146	3,430	7,203
Interest	4,239	4,152	8,262
Admin. and gen.	265	265	717
Operating Income	2,627	2,499	5,244
Depreciation	515	450	936
Earnings before tax	2,112	2,049	4,308
Tax	982	945	1,935
Earnings after tax	1,130	1,104	2,373
Sale of prop.	23	53	2,379
Net Earnings	1,153	1,157	4,751

Due to lower trading profits and reduced gains on sales of investment properties a slight drop in earnings per share from 20.5 cents to 19.4 cents is reported.

In February the company raised $20m. at 11 per cent. per annum by way of series "D" Debentures for a term of 22 years, subject to call in 1985 at the holder's option.

The company will be starting several new development projects in the coming months including a retail development at 8th Avenue and 4th Street, Calgary; an office development in Winnipeg and an office/industrial complex in Calgary.

FT Share Information Service

The following securities have been added to the Share Information Services appearing in the Financial Times:

Dundee Crematorium
(Section: Industrials (Misc.)).
Hay (Norman)
(Section: Indsutrials (Misc.)).
Spencer Clark Metal
(Section: Engineering).

Sanderson Kayser

IN THE FIRST quarter of 1975 each of the overseas subsidiaries of **Sanderson Kayser** increased it's turover and appreciably improved its trading results over the corresponding quarter of 1974, reports the chairman Mr. N. C. Macdiarmid.

Turning to the group as a whole however he states that early in the new year a sharp downturn occurred in the wire products market, stemming from suspensions of scheduled deliveries and cancellations of orders, which necessitated short-time working in sections of the steel division.

This tendency towards suspension of deliveries and reduced ordering has developed markedly over a wide range of the company's products in the first four months of 1975, members are told.

The chairman also warns that increases to be faced, especially for energy products and employment costs, will be substantial.

"Continuation of the 1974 wage rate increases in the current year, with trading conditions depressed would be a cause of great concern to the conduct of the business," he says.

As reported on May 14, turnover expanded from £7.06m. to £9.44m. in 1974, and taxable profits increased from £670,101 to a record £816,565. The dividend is 3.58p (3.3p) net.

Jessel receives $15m. Guyana compensation

By Our Own Correspondent GEORGETOWN, May 26.

The Guyana Government to-day nationalised all local holdings of Jessel Securities, and compensation totals $15m. (just over £3m.).

Of this, $5m. will be cash for Jessel interest in Diamond Liquors and in Demerara Sugar Terminals and the Sandbach Parker Company. The remaining $10m. will be paid over ten years out of future profits subject to 25 per cent. withholding tax.

The $10m. represents payment for the two sugar factories at Diamond and Leonora, 21,000 acres of cane and all buildings and stores on the two estates. Nothing will be paid for state lands held by Jessel and the Government will not assume responsibility for debts owed to or by the Jessel Group. The takeover also involves some 2,000 acres of land partly under oil palm but no compensation is being paid for it.

The compensation terms come as the final stage to a situation which began in February with the announcement by the Government that it was investigating working conditions on Jessel's two sugar estates.

Subsequently, Jessel announced in April that it planned to sell all its Guyanese interests to the Government and said that Sir Peter Rawlinson, the former Attorney General, was to act on its behalf in negotiations on compensation terms.

Lead Inds. long-term confidence

THE RECESSION which started to show in the second half of 1974 particularly in the chemical industry, continued in 1975, says Mr. A. S. Davies, chairman of Lead Industries.

This, he says, has spread to other sections, including diecasting, but some parts of the metal business and other activities such as ceramic raw material supply in the U.K. have kept up well.

Mr. Davies stresses that margins in the short term could often be improved by taking short term expedients, but the directors feel that the business should be run with a longer viewpoint, and that profitability is best determined by taking a three year or even longer period.

And the directors remain optimistic in the longer term, he declares.

Capital expenditure authorisations have been slowed down in some cases, but in general these are being well maintained.

The chairman points out that in the past, authorisations have frequently been given when the immediate outlook appeared poor, and the resultant expenditure has proved invaluable.

"We expect that the expenditure now being approved will be equally justified," he adds. Group contracts placed at end 1974 were £2.35m. (£1.35m.) and authorised but not placed £5.1m. (£1.27m.).

Source and application of funds shows an increase in working capital of £1.06m. (£5.69m.).

As reported on April 25 group pre-tax profit for 1974 was £21.32m. (£12.2m.) and the dividend is 4.69p (4.31p) net per share. Inflation adjusted accounts show sales on C.P.P. basis £160.1m. (£118.46m.) and pre-tax profits £18.61m. (£11.89m.).

An approximate analysis of profits, less minorities, is as follows.

	1974 £000	1973 £000
Metals and chemicals	5,785	3,467
Paint and wallpaper	2,305	2,378
Titanium dioxide	9,585	4,348
Ceramic supplies	2,585	1,514
Holding company	96	123
Geographically the profit was derived as to:—		
U.K.	10,525	5,992
Elsewhere Europe	4,614	1,953
Australasia	1,776	1,902
South Africa	1,814	1,166
India	1,190	644
N. and S. America	865	204

Meeting 14 Gresham Street, E.C., June 19, noon.

● comment

Not exactly encouraging in its comments about the immediate profit outlook, Lead Industries remains optimistic about the longer term—basing this on general maintenance of its capital expenditure programme. The latter has totalled £20.9m. over the past five years. The point here is that the group is a major beneficiary of deferment of tax on unrealised stock appreciation for, without this, additional tax liabilities of approximately £3m. and £2m. would have had to be met in early 1975 and 1976 respectively. Certainly the share price is looking further ahead at 118p yielding 6.2 per cent.

BOARD MEETINGS

The following companies have notified dates of Board meetings to The Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available whether dividends concerned are interims or finals and the sub-division shown below is based mainly on last year's time-table.

TO-DAY

Interims: Gomme Holdings, Quality Cleaners, Scottish National Trust.

Finals: Borhat Tea, Brown Shipley, Chubwa Tea, C. E. Heath, William Mallinson and Denny Mott, Noyapara Tea, Teacher (Distillers), Transparent Paper.

FUTURE DATES

Interims:	
Govett European Trust	May 28
Land and House Property	June 10
Stakis (Reo) Organisation	May 28
Finals:	
Alliance Investment	June 4
Buckley's Brewery	June 5
Chubb	July 3
Dawson (James)	June 2
East Midland Allied Press	May 28
Hanover Grand	May 29
Hill Samuel	June 10
London and Aberdeen Inv. Tst.	May 28
Morrison (Wm.) Supermarkets	May 28
Turriff Construction	June 2
United Engineering Industries	May 29

Tarmac overseas growth

WHILE VISUALISING a greater overseas contribution to profits of Tarmac in the coming years, the chairman, Mr. R. Martin, also sees the U.K. business prospering.

Although it will be difficult to improve upon 1974 results, he reports an increase in the first quarter of 1975 and the company is, at present, above budget forecasts.

If this trend continues the directors expect at least to maintain the gross dividend on capital as increased by the proposed rights issue.

As reported on May 7 with details of the £10.6m. issue and property revaluation, group pre-tax profit increased from £16.34m. to £17.78m. in 1974, and the net dividend is 7.345p (6.76725p). Directors' remuneration includes £23,000 compensation for loss of office.

Source and application of funds shows an increase of £5m. (£8m.) in bank overdrafts less cash, and an increase of £1.1m. (£5m.) in term loans.

Meeting Hyde Park Hotel, S.W., June 17, noon.

Chairman's statement Page 6

Pending dividends

For the convenience of readers the dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's announcements, except where the forthcoming Board meetings (indicated thus*) have been officially published. It should be emphasised that the dividends to be *declared will not necessarily be at the amounts or rates per cent.* shown in the column headed "Announcement last year." Preliminary profit figures usually accompany final dividend announcements.

	Date	Announcement last year
AD Intntl.	May 30	Final 5.5%
AVP Industs.	July 2	Final 5%
*Allen (Edgar)	June 24	Final 9.9%
Allied Breweries	June 25	Int. 5.5%
*Amalgamated Power	May 29	Final 10.2%
Anglo Amer. Group	June	Dividends
Anglo-Transvaal Group	June	Dividends
*Armitage Shanks	June 11	Final 24.7%
Assoc. British Foods	June 10	Sec. int. 28%
*Assoc. Engineering	May 29	Int. 5.5%
Assoc. Newspapers	June 13	Final 15.95%
Assoc. Television	June 27	Final 18.1%
*Avon Rubber	June 18	Int. 4.2%
Barlow Rand Group	June	Dividends
*Bass Charrington	May 28	Int. 8%
Bassett (G.)	June 18	Final 18.1%
BOC Intnl.	June 24	Int. 4.9%
BPB Industs.	June 26	Final 7.4%
Brown (John)	June 28	Final 10.6%
*Brown (Matthew)	May 29	Int. 4.8%
*Brown Shipley	May 27	Final 11.3% §
Charrington Gardner	June 18	Final 10.9%
*Charter Consolidated	June 2	Final 22.17%
*Charterhouse	May 30	Int. 5.2%
*Chloride	June 10	Final 11.47%
*Chubb	July 2	Final 15.6%
*Coats Patons	May 29	Final 10.3%
*Cohen 600	June 12	Final 9.4%
Comben	June 21	Final 35.1%
Corner House Group	June	Dividends
*Courtaulds	May 29	Final 20.5%
Davis (G.)	June 18	Final 12.1%
Dawson Intnl.	June 26	Final 19.4%
*De La Rue	June 3	Final 23.85%
Doncaster (Daniel)	June 18	Final 8.5%
Eastern Produce	May 22	Final 4.3%
Elliott (B.)	June 27	Final 13½% §
English China Clays	June 14	Int. 4.785%
*Exchange Telegraph	May 29	Final 15.9%
Finlay (Jas.)	May 31	Sec. int. 10.4%
General Mining Group	June	Dividends
Gold Fields Group	June	Dividends
*Gomme	May 27	Int. 3.7%
GRA Property Trust	Apr. 10	Final 11.5%
Granada	July 2	Int. 7.1%
*Grand Metropolitan	June 12	Final 4.179%
Greening (N.)	May 30	Final 6.3%
Hambros	June 14	Final 29.387%
*Hargreaves	June 17	Final 8.5%
Henlys	June 26	Int. 13%
Hickson and Welch	June 7	Int. 8%
Hill (Philip) Inv.	May 30	Final 15.8%
*Hill Samuel	June 10	Final 13.3%
Initial Services	June 21	Final 13.7%
*International Paint	May 29	Final 7.9%
Jo'burg Cons. Group	June	Dividends
Johnson Matthey	June 12	Final 8.424%
*K Shoes	May 29	Int. 3.8%
Land Securities	June 17	Final 6.8%
*Lindustries	June 18	Int. 6.9%
Lond. and Nthn. Secs.	May 29	Final 11.7%
"LOFS"	June 27	Final 19.2%
*McCorquodale	June 5	Int. 8.4%
Maple Macowards	May 1	Final 11%
*Marley	May 28	Int. 8.9%
*MEPC	June 4	Int. 7.8%
Mercury Securities	July 3	Final 15.4%
*Metal Box	June 2	Final 9%
News Intnl.	June 28	Int. 30.5%
Peninsular and Oriental Dfd.	June 5	Int. 3.98%
*Press (Wm.)	May 29	Final 23%
Racal Electronics	June 26	Final 11.1%
Rediffusion	June 28	Final 14.4%
Renold	June 27	Final 8.5%
Robinson Rentals	July 2	Int. 14.4%
Scapa	June 25	Final 11.3%
Selection Tst.	June 3	Final 50.8%
Sketchley	June 18	Final 12.9% §
Standard and Chartered	June 17	Final 9.1%
UBM	June 7	Final 13.755%
Union Corpn. Group	June	Dividends
Vaux Brews.	June 27	Final 13.6%
Warren Tea	May 28	Final 5.1%

* Board meetings intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made from reserves.

Local Authority Investments

LOCAL AUTHORITY loan rates strengthened at the very short end of the temporary field last week, though weakening in the longer temporary and some mortgage sectors.

Deposits at seven days' notice rose to 9½-9¾ per cent., from 9¼-9½ per cent., but one-month fell to 9¾-9¾ per cent., from 9¾-10 per cent., three-month to 10-10¼ per cent., from 10¾-10¾ per cent., and one-year to 12¾-12½ per cent., from 12¾-13¼ per cent.

The Financial Times Government Securities Index rose 0.28 point on the week, to 57.58, and stood at 57.62 on Tuesday and Wednesday.

One-year local authority bonds were placed during the week at par, with a coupon at 12¼ per cent., to offer a yield ⅛ per cent. below that on the previous week's batch.

Greater London Council 91-day bills to a total of £25m. were placed by tender at an average rate of discount of 9.626 per cent. The offer attracted bids of £52m. The minimum-accepted tender was £97.57.

Public Works Loan Board rates were revised with effect from Saturday. Quota loan rates were cut by amounts ranging from ⅛ per cent. to ¼ per cent., but alterations in non-quota rates varied from a cut of ½ per cent. to increases of ⅛ per cent. A revised list of PWLB rates appears on this page.

* Rate (%) May 23, 1975	
2 days' notice (deposit receipt)	9¼—9½
7 days' notice (deposit receipt)	9½—9¾
7 days' notice after one month (deposit receipt)	9¾—9¾
7 days' notice after three months (deposit receipt)	10—10¼
7 days' notice after six months (deposit receipt)	10¾—10¾
Mortgage at one month's mutual notice after 11 months	n.a.
Mortgage at one month's lender notice after 11 months nominal term 2-5 years	12¾—12½
2 years' mortgage	13¼—13¼
3 years' mortgage	13¼—13¾†
4 years' mortgage	13¾—14¼†
5 years' mortgage	14—14¼†
6-10 years' mortgage	n.a.
11-30 years' mortgage	n.a.

* Rates are for sums not less than £20,000 and are subject to local variations and fluctuations. Nominal. † Shorter periods may attract higher rates than longer. n.a. Not available.

Public Works Loan Board rates

(Effective from May 24, 1975)

Years	Quota loans Repaid By instalments	Quota loans Repaid At maturity	Non-quota loans Repaid By instalments	Non-quota loans Repaid At maturity
Up to 5	11¼	11¼	13¾	13¼
Over 5, up to 10	11¾	13¼	13¼	14¼
Over 10, up to 15	12½	14¼	13¾	15¼
Over 15, up to 25	13¼	14¾	14¼	15¾
Over 25	14¾	14¾	15¾	15¼

RECENT ISSUES

EQUITIES

Issue Price p.	Amount Paid Up	Latest Renunc. Date	1975 High	1975 Low	Stock	Closing Price p.	+ or −	Div. £ or Amount	Times covered	Gross Yield	P/E Ratio
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

FIXED INTEREST STOCKS

Issue Price £	Amount Paid Up	Latest Renunc. Date	1975 High	1975 Low	Stock	Closing Price £	+ or −
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

"RIGHTS" OFFERS

Issue Price p.	Amount Paid Up	Latest Renunc. Date	1975 High	1975 Low	Stock	Closing Price p.	+ or −
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

INTERNATIONAL COMPANY NEWS

Exchange rates clip Winterthur income

BY JOHN WICKS

ZURICH, May 26.

DESPITE A considerable rise in local-currency takings, gross premium income of the accident and casualty insurance company of Winterthur dropped by 3.8 per cent. last year to Sw.Frs.1.47bn. (1.53bn.).

Of this, direct Swiss business rose by 2.8 per cent. to Sw.Frs. 598m. (581m.). Foreign business, centred particularly in France, Germany and Belgium, actually increased by 15.5 per cent. in local-currency terms but the upswing of the floating Swiss Franc led to a 1 per decrease in an end-of-year comparison. Part of the 3.8 per cent. decline in gross income was made up for by a net decrease in the value of re-insurance ceded.

Annual profits nevertheless rose to Sw.Frs.37.69m. (33.12m.), from which the company is to pay an unchanged dividend of Sw.Frs.30, plus a centenary bonus of Sw.Frs. 15 per share. Winterthur president Dr. Hans Braunschweiler, who said he thought the current year was likely to be "good," told a Press conference that if profit development were retained there should be no difficulty in keeping up the dividend level.

Among major subsidiaries, "Winterthur" Life Insurance Company, booked a surplus for the year up by 23.7 per cent. to Sw.Frs.128m. (103.5m.), of which Sw.Frs.119.4m. (101.1m.) was transferred to the insured persons' profit-sharing fund, with payment of a Sw.Frs.70 per share dividend from the remainder. The Zurich-based Federal Insurance Company, whose gross premium income dropped 10 per cent. to Sw.Frs.123m. (136.6m.) in 1974 and profits to Sw.Frs.0.5m. (0.6m.), is to be integrated into the parent company.

Elsewhere, Winterthur undertook reductions of book value for its British participations — it has interests in Provident Life and Anilis Holdings — and divested itself of part of its shareholding in CNA Financial of Chicago, following a successful take-over bid for the company's majority by Loews Corporation. Winterthur now has a 2.6 per cent. stake in CNA, which Dr. Braunschweiler says it does not intend to reduce further.

Swiss Re-Insurance pessimistic

ZURICH, May 26.

SCHWEIZERISCHE Rueckversicherungsgesellschaft (Swiss Re-insurance) said overall results for the year ending June 30 will probably be worse than in the previous year, but gave no figures.

Last year group net profit rose to Sw.Frs.85m. (£82m.) and group gross premium receipts advanced to Sw.Frs.3.36bn. (£3.154bn.). Parent company net profit rose to Sw.Frs.64m. (£53m.) and gross premium recepits to Sw.Frs.2.55bn. (£2.41bn.). The business year comprises the re-insurance business for the calendar year and other earnings, from July 1 to June 30.

The company said in the accident and casualty re-insurance sector there had been a considerable increase in premium income in some areas measured in local currencies, but when this was calculated in Swiss Francs there would be no substantial alteration in the overall premium income compared with the previous year.

A letter to shareholders drew attention to two major natural catastrophes in Australia last year, and said the generally unsatisfactory progress of U.S. and Canadian business also produced substantial losses.

The company said that in the financial sector there had been substantial losses in value in the first half of the business year, owing to further declines in the bond and stock exchange markets, but added the position had improved since the start of 1975.

Reuter

John Wicks adds: The Board of Union Re-Insurance, also of Zurich, recommends payment for 1974 of an unchanged dividend of Sw.Frs.120 per share and transfer to reserves of Sw.Frs.1m. (£0.5m.), as well as a capital increase at par to Sw.Frs.12m. (£10m.). After premium income for the year of Sw.Frs.276.5m. (£274m.), net profit was slightly lower at Sw.Frs.2.1m. (£2.2m.).

Neste Oy sales doubled

BY LANCE KEYWORTH

HELSINKI, May 26.

NESTE OY, the State-owned oil refinery, recorded sales of F.Mks.3.89bn. (approx. £480m.) in 1974. This is just over double the value of sales in 1973, and puts Neste far out in the lead in the ranking list of industrial companies in Finland.

This was in spite of the fact that total consumption of oil products in Finland contracted by 14.4 per cent. in 1974. But, of course, the sales total reflects the four-fold increase in the landed price of crude last year. Also contributing, however, was the diversification of sales—the volume of petrochemical products sales doubled compared with 1973 and accounted for 3.2 per cent. of turnover. Two new products were added to the petrochemical range in 1974 — butadiene and propylene.

Neste began deliveries of Soviet Natural Gas on schedule in January 1974. The volume imported during the year was 442m. cubic metres. This will rise to 1bn. cubic metres in the current year and reach a peak of 1.4bn. cubic metres in 1979.

The refinery expansion project at Porvoo, east of Helsinki, is proceeding according to plan. Start-up is scheduled for the end of 1975. The new plant will raise Neste's refining capacity by 5m. tons to 14m. or 15m. tons annually.

Investments in fixed assets totalled Fmks. 462m. in fiscal 1974, a 50 per cent. increase on the previous year. Of the total Fmks. 210m. went to the Porvoo refinery project for which foreign loans have been raised totalling $130m, of which $40m. had been drawn by the end of the fiscal year.

Neste's share capital is Fmks. 203.2m. The company paid a dividend of 8 per cent. on the A-series shares. The profit for the year after depreciations and taxes was Fmks. 10.89m. This figure is lower than the true net earnings for the year as the Finnish corporate tax law permits the writing down of inventories and tax-exempt transfers to invent funds.

Deutsche Bank sees good year

HAMBURG, May 26.

DEUTSCHE BANK operating profit in the first four months of this year was around the average monthly level in 1974 and results for the full year should again be good, Board spokesman Franz Heinrich Ulrich said.

Securities business earnings were very good although those from interest business were hit by strong bank competition for customers, and the overall interest margin was slightly lower than last year. Lower rates were paid on reduced time deposits but the bank also reduced its interest rates charged on credits, he told the annual meeting.

Parent company business volume in the four months fell 4 per cent. to DM48.8bn., compared with end 1974, with credits granted falling 7 per cent. Additional savings deposits of DM1.4bn. in the period almost equalled total 1974 growth in this sector. Group business volume rose 0.5 per cent. to DM79.8bn. at end April, with foreign business compensating for lower domestic trade, Herr Ulrich added.

Meanwhile, the annual meeting approved the bank's proposal to restrict the voting rights of any one shareholder to 5 per cent. of capital. Herr Ulrich said last month that the measure is only precautionary as the largest known existing stake is one of 3 per cent. held by an insurance group.

Reuter

Conti Gummi halves losses

By Jonathan Carr

BONN, May 26.

CONTINENTAL GUMMI, West Germany's largest domestic tyre producer, last year managed to more than halve the loss it sustained in 1973, while substantially increasing turnover.

The company said the 1974 loss totalled DM19.6m. against Dm40.6m. in 1973, while sales of the parent company rose by 15 per cent. to DM1.45bn. Sales for the whole concern were up by 14 per cent. to DM1.58bn.

The company hopes it may be able to break even this year after three consecutive years of loss—although it also believes that the vehicle industry, on whose orders it is particularly dependent, will pull itself only slowly out of its difficulties.

Meanwhile Phoenix Gummiwerke is again passing its dividend. It last paid a dividend of DM8.0 in 1971. But the company reports a return to profits with the announcement of net. 1974 profits of DM1.1m., all of which will be carried forward. This compared with a loss of DM7.1m. in 1973 and total net losses of DM15.1m. over 1972 and 1973.

WORLD ECONOMIC INDICATORS
INDUSTRIAL PRODUCTION INDICES

					% change on year
	April '75	March '75	Feb. '75	April '74	
U.S.	109.4	109.6	110.3	124.9	−12.4
	March '75	Feb. '75	Jan. '75	March '74	
U.K.	104.6	107.3	104.8	105.9	−1.2
Belgium	—	106.8	113.7	—	−7.0
Italy	107.9	108.8	109.0	125.9	−16.7
W. Germany	108.5	103.4	96.5	115.0	−5.7
Japan	109.7	108.2	108.8	180.8	−16.1
Holland	—	101	108	116	−7.3
France	112	116	116	123	−8.9

FINANCIAL TIMES STOCK INDICES

—	May 23	May 22	May 21	May 20	May 19	May 16	A year ago
Government Secs.	57.58	57.60	57.62	57.62	57.57	57.60	58.64
Fixed Interest	57.67	57.62	57.41	57.24	57.14	57.17	58.15
Industrial Ordinary	355.0	349.7	351.6	356.9	353.8	341.6	289.2
Gold Mines	455.2	442.3	425.6	402.7	405.9	389.8	317.0
Ord. Div. Yld. %	5.85	5.96	5.93	5.84	5.86	6.06	6.85
Earnings Yld. % (full) (a)	17.71	17.96	17.86	17.19	17.21	17.79	17.65
P/E Ratio (net) (a) (b)	7.96	7.84	7.88	8.20	8.18	7.91	8.02
Dealings marked	6,849	7,561	9,034	6,818	6,981	6,662	†5,630
Equity turnover £m.	—	69.98	98.80	139.23	85.46	95.63	33.39
Equity bargains total	—	18,559	28,436	26,846	21,638	20,632	10,272

10 a.m. 351.4. 11 a.m. 351.2. Noon 354.6. 1 p.m. 354.9. 2 p.m. 355.2. 3 p.m. 355.1.
Latest Index 01-246 8026. Excluding regional exchanges.
(a) Based on 52 per cent. corporation tax. (b) Nil=7.91.
Basis 100. Govt. Secs. 15/10/26. Fixed Int. 1928. Ind. Ord. 1/7/35. Gold Mines 12/9/55. S.E. Activity July-Dec. 1942. * Corrected.

HIGHS AND LOWS

—	1975 High	1975 Low	Since Compilation High	Since Compilation Low
Govt. Secs.	62.34 (20/3)	49.18 (3/1)	127.4 (9/1/35)	49.18 (3/1/75)
Fixed Int.	62.31 (21/3)	50.53 (3/1)	150.4 (28/11/47)	50.53 (3/1/75)
Ind. Ord.	355.9 (20/5)	146.0 (6/1)	543.6 (19/5/72)	49.4 (26/6/40)
Gold Mines	442.3 (22/5)	280.2 (20/1)	442.3 (22/5/75)	43.5 (26/10/71)

S.E. ACTIVITY

—	May 23	May 22
Daily—		
Gilt-Edged	115.6	112.2
Industrials	236.5	282.5
Speculative	87.8	100.9
Totals	156.9	172.1
5-day Av'r'ge		
Gilt-Edged	117.9	118.4
Industrials	293.8	295.2
Speculative	86.4	84.1
Totals	178.6	177.7

FT—ACTUARIES INDICES

—	May 23	May 22	May 21	May 20	May 19	May 16	A year ago
Industrial Group	139.76	138.79	139.33	141.24	137.18	132.32	116.36
500 Shares	151.59	150.27	150.85	152.81	148.74	143.87	125.48
Div. Yield pc.	5.80	5.85	5.83	5.75	5.92	6.12	6.49
P/E Ratio (net)	7.36	7.29	7.31	7.47	7.29	7.05	7.58
All Shares	149.95	148.87	149.51	152.07	148.02	143.43	122.54
Consols yield pc.	15.11	15.10	15.53	15.09	15.20	15.18	13.96

BASE LENDING RATES

AFI International	9½%
Allied Irish Banks Ltd.	9½%
Anglo-Portuguese Bank	10 %
Henry Ansbacher	10½%
Banco de Bilbao	9½%
Banco de Jerez	10½%
Bank of Cyprus	‡10 %
Banque du Rhone S.A.	10 %
Barclays Bank	9½%
Barnett, Christie Ltd.	11 %
Bremar Holdings Ltd.	10½%
Brit. Bank of Mid. East	9½%
■ Brown Shipley	10½%
Cayzer, Bowater Co. Ltd.	10½%
Cedar Holdings	11 %
■ Charterhouse Japhet	10½%
C. E. Coates	10½%
Consolidated Credits	12 %
Continental Trade Bk.	9½%
Co-operative Bank	* 9½%
Copleys Bank	11½%
Corinthian Securities	9½%
Credit Lyonnais	9½%
G. R. Dawes	10½%
Duboff Brothers	11½%
Duncan Lawrie	10½%
English Transcont.	11½%
First London Secs.	9½%
■ Antony Gibbs	10 %
Goode Durrant Trust	10 %
Greyhound Guaranty	9½%
Grindlays Bank	10 %
■ Guinness Mahon	10½%
■ Hambros Bank	9½%
Hawtin & Partners	13 %
■ Hill Samuel	§10 %
C. Hoare & Co.	† 9½%
Julian S. Hodge	10½%
Industrial Bank of Scot.	9½%
Jacobs, Kroll	11½%
Keyser Ullmann	10½%
Kinghurst Securities	12 %
Lloyds Bank	9½%
London & European	11½%
London Mercantile	11½%
Midland Bank	9½%
■ Samuel Montagu	9½%
■ Morgan Grenfell	9½%
Morris Wigram Ltd.	11½%
National Westminster	9½%
Northern Comm. Trust	11½%
Norwich General Trust	10 %
Portman Guaranty	11 %
P. S. Refson & Co.	9½%
Rossminster Accept'ces	9½%
Royal Trust of Canada	10½%
E. S. Schwab	11½%
Security Trust Co. Ltd.	11 %
Shenley Trust	11½%
Standard & Chartered	9½%
Sterling Credit	12 %
Stewart Salmon & Co.	9½%
Thames Guaranty	12 %
Trade Development Bk.	9½%
Twentieth Century Bk.	11½%
United Bank of Kuwait	9½%
Wallace Brothers Bank	10½%
Whiteaway Laidlaw	10 %
Williams and Glyn's	9½%
Yorkshire Bank	9½%

■ Members of the Accepting Houses Committee.
* 7-day deposits 6½%, 1-month deposit 6¾%.
† 7-day deposits on sums of £10,000 and under 6½%, up to £25,000 6¾% and over £25,000 7¼%.
‡ Deposit Base Rate 9½%.
§ Demand deposit 7½%.

INSURANCE BASE RATES

† Atlantic Assurance	11½%
Cannon Assurance	9 %

† Address shown under Insurance and Property Bond table.

MINING NOTEBOOK

Rounding off the June dividend predictions

BY LODESTAR

CONTINUING the survey of next month's half-year dividend prospects for the South African gold mines I come to the Anglo-Vaal group's Hartebeestfontein. Here a final of 125 cents is the general choice although there are deviations below this. It would make a 1974-75 total of 210 cents (133.6p), well up from last year's 160 cents. So the shares at £30 are one of the most popular medium-term selections in brokers' lists and also figure in the longer view for uranium enthusiasts.

The mine has been going for 20 years. Something approaching this could still lie before it in view of the marriage with the adjoining Zandpan property. Zandplan shares are still quoted. Their value is based on the 19.6 per cent. stake in Hartebeest. They should stand at 16.9 per cent. of the price of the latter always presuming that the policy will be continued of passing on in full the distributions from that company.

The Gold Fields group's Venterspost is the last of the mines concerned in this survey which ends its year on June 30. Here there are wide divergencies of dividend opinion ranging, believe it or not, between 20 and 45 cents. I will certainly plump for something at the lower end of the scale in this particular case in view of the poor March quarter performance and the impact on a low-grade mine such as this of a black labour shortage which was described as "severe." The interim was 40 cents, the 1973-74 total 75 cents.

Even so, the shares at £10¼ are regarded as *intriguing* by the gold price bulls in view of the Middelvlei ground acquisition which could extend the overall life to something approaching 20 years. There could thus, it is reckoned, be some much more promising dividend prospect ahead always assuming, of course, that the bullion price is at least sustained.

East Driefontein

The young East Driefontein mine, which only started production in 1972, is expected to lift its 1975 interim modestly by 5 cents to 25 cents on the way to a full-year total of 70 cents (44.5p). A June payment of this calibre would expunge the loan element in the combined units so that the "A" shares would start to rank for dividend in December. In looking further forward the initial impact of tax will be cutting into distributable profits in 1976.

But, as the chairman has pointed out, the effect of this is likely to be offset, anyway in part, by reduced capital expenditure and by a progressive increase in the milling rate in a year which is expected to see the original target of 180,000 tonnes a month achieved. Last quarter only 107,000 tonnes a month were treated. East Drie shares at £12 figure prominently in most brokers' buying lists especially for those who are prepared to take a long-term view.

There is a good deal of caution in the estimates of the Stilfontein payment with variations between 18 and 25 cents. In any case, the 1975 interim is expected to be less than the 27.5 cents for last year when the final was 37.5 cents to make a total of 65 cents (41.3p). This was a generous distribution taking into account capital expenditure which is expected to jump to R8m. this year from 1974's R3.79m. So a drop in dividends is almost inevitable especially as a shortage of black labour was curtailing operations last quarter. Stilfontein shares at 480p are thus not looked upon with much favour at the moment.

Western Deep

An interim of 70 cents (44.5p) is the general prediction for the Anglo American group's big Western Deep mine. This would be the same as that for last year when the final was 90 cents. A lower total than the 160 cents (101.8p) for 1974 is quite a possibility owing to the shortage of black workers which is hitting this labour-intensive mine, the effect of which was compounded by the impact of two underground fires in the March quarter.

Capital expenditure remains heavy but it is probable that the market opinion of Western Deep would not be so high as it is if it were not for the participation in the new Elandsrand gold mine which it is intended to pass on to shareholders. A "hold" but not necessarily a new "buy" is the general verdict. Friday's price was £22.

With Western Areas there is naturally a tendency to abide by the chairman's March prediction that an increase in the 1975 dividend is unlikely. Last year's total was 70 cents (44.5p). How the payments will be split up on this occasion is the main reason why estimates of the interim vary between 25 and 35 cents. The company, which now incorporates the adjoining Elsburg property, is likely to become liable for tax during the current quarter.

The shares should remain prominently in pursuit of any further advance in the gold price which last week broke out firmly in an upward direction from its recent indeterminate course in the $160-$170 an ounce range. Elsberg is still in existence as a company. Its holding in Western Areas means that Elsburg shares are worth 65 per cent. of the former's price, which was 710p on Friday.

For the rest of the June dividend declaration companies too much guesswork is involved to make any estimates a worthwhile exercise. These are the older marginal mines, namely Durban Deep, East Rand Proprietary, Grootvlei, Marievale, Vlakfontein and South African Land.

All are highly dependent on the gold price keeping pace with the inflationary trend of mining costs and some of them, notably East Rand, have been particularly vulnerable to labour shortages. Their shares are thus primarily for those who see no way for the bullion price other than up and who are prepared to take a greater degree of risk than is involved in those of the longer-life higher grade mines.

Finally, there is West Rand Consolidated which is in a rather special class having forsaken uranium production last year and turned back to being just a State-aided gold producer. Even the chairman was not prepared to look ahead in his annual statement last month. The main uncertainty is whether the mine can keep going long enough on gold to enable it to take advantage of the hoped for improvement in the market for uranium. At one time it was thought that the overall life prospect did not extend beyond 1976 but a rising bullion price could make production viable beyond this date presuming that State aid continues.

For the record there are hopes that there will be an interim next month but it is unlikely to be more than half the 20 cents for last year which was followed by a similar final. This would hardly make the shares, at 415p, an exciting proposition particularly in view of the life doubts.

Pegmin

My "whatever happened to" series for Australian penny stocks has brought a flood of inquiries about Pegmin and Leichhardt. The burning question is what is happening to their formerly exciting base-metal prospect in the West Sumatra area. The answer, regrettably, is nothing. They are still seeking a partner to replace the Shell Bil'.on group which withdrew last October.

Potential co-venturers are apparently being put off by what are described as difficult "contract of work" terms imposed by the Indonesian Government. Other concerns prospecting in that country have made efforts to have these terms revised but so far little progress is said to have been made.

The directors can thus only come to the conclusion that when base-metal prices improve much more interest will be shown in Indonesian mining prospects. The London prices of Pegmin and Leichhardt are 2½p and 2p respectively.

INSURANCE

Employers' liability risks

BY OUR INSURANCE CORRESPONDENT

FOR close on six months the newly established Health and Safety Commission has been responsible, as a result of the provisions of The 1974 Act, for supervising all aspects of Health and Safety at work including the planning of new legislation. Under its control is the Inspectorate, still, alas, insufficient in strength, but now having greater powers than previously to enture safety even by prohibiting, where necessary, the use of machinery.

As yet, of course, the impact made by these changes is not readily discernible, but as time goes on the Commission must increasingly exert a greater influence by raising the general level of safety consciousness throughout industry and commerce, and with both employers and employees begin to cut back the incidence—and cost—of industrial injury and disease.

Changing

For the last three years' employers' liability risks have been compulsorily insurable, though even before compulsion there was a very wide measure of insurance, written by the companies and at Lloyd's. The British Insurance Association reckons that 98 per cent. of its members' E. L. business is written by 25 companies—which number includes all the well-known composites, together with a number of specialist, often mutual, offices. With a few notable exceptions, in the past, most of the companies were content to write employers' risks so long as claims costs were predictable, premiums therefore calculable, and profit readily achievable, taking more than a passing interest in industrial safety.

But times are changing. Inflation is biting hard, and there is the new atmosphere created by the implementation of the new Act. As witness the conference recently held at Eastbourne, and run jointly by the BIA and the Factory Inspectorate, for 120 representatives of the construction industry. Speakers included the Deputy Superintending Inspector of Factories and from the insurance side both the general manager, and the Accident Prevention Engineer of the "Iron Trades," a major British employers' liability insurance company.

The declared objective of the conference was to impress on the construction industry the need for co-operation with insurers, and the Inspectorate, so as to plan for the reduction in the number of construction accidents and their cost.

Though various estimates have been made from time to time, the total cost to the nation of accidents at work remains uncertain; when the Robens Committee was at work two years ago, producing the report that led to the 1974 Act, an estimate was made of £900m.: if that was reasonably accurate the figure this year must approach £1,200m. because of inflation.

This sum includes not only State insurance benefits and compensation paid by insurers but also loss of production and services and all kinds of consequential economic loss. Against such a massive total the amount of compensation employers' liability insurerse pay may seem relatively insignificant — perhaps around £75m. or so in the current year.

This figure is my calculated guess, based on statistics assembled by the BIA from the returns made by member companies to the DOT for the trading year 1973, when the cost of claims incurred amounted to £55.5m.: this figure does not include claims costs incurred by non-BIA companies or by Lloyd's underwriters.

Tight margins

The assumption of a £75m. payout in 1975 predicates the collection this year of over £100m. of premium, which must put employers' liability insurance by size in third place in British insurers' U.K. business, after motor and fire.

Insurers' EL operations have always been conducted on a tight margin, particularly for the bigger industrial risks, and there is not much spare cash to permit insurers positively to invest in risk improvement and industrial safety measures — though the larger EL offices do employ safety experts who do much to restrict incidence and reduce *severity of accidents.*

Over the past 30 cyars, statutes and judge made law have combined to make industrial liability compensation payable virtually on a no fault basis—there are relatively few occasions where the employee is found to have been to some degree at fault and so only entitled to reduced damages. Moreover liability damages inevitably include a large item for lost wages, and so are fast escalating, so it is increasingly in insurers' interests to try to restrict the claims-premium spiral by turning their collective attention to accident prevention via the BIA, if not through their own safety officers. The Eastbourne conference is clearly the forerunner of others, and is the more public manifestation of BIA members' increasing work in factories and on the shop floor.

London tea sales

At the tea sales held in London last week 40,517 packages sold realised an average price of 57.37p per kilo, compared with 37.54p at the previous sale and against 60.28p a year ago. Plain tea was quoted at 54p.

	No. of kilos	Average per kilo
African Highland Prod.	73,980	59p
Assam Co.	27,416	60p
Assam Frontier	55,700	57p
Attaree Khat.	11,679	57p
Central Africa	28,751	55½p
Central Provinces	93,532	55½p
Chubwa	16,720	55½p
Chulsa	9,136	58p
Consold. Estates	40,159	55½p
Consold. Tea and Lands	32,665	54p
Dekhari	20,392	58p
Demodera	22,907	53½p
Duckwari	18,666	54½p
Eastern Assam	18,435	57p
Empire of India	11,172	59p
Jokai	35,501	56p
Kanan Devan	35,711	57½p
Kenya	53,475	61½p
Luieri	43,159	57p
Lumuva	18,311	58p
Moran	40,799	56p
Nayabedde	25,388	54½p
New Dimbula	16,057	58p
Ouvah	27,709	54p
Pabbojan	45,949	58p
Tanganyika	17,945	62½p
Thanai	25,490	55p
Tukuyu	24,648	61½p
United Planters	26,525	56½p
Upper Assam	29,174	58½p

Stocks at May 16 amounted to 70,058 metric tons compared with 53,970 metric tons a year ago. Converted at 48.988 kilos per package.

WEEKLY AVERAGES OF U.K. INDICES

Week to—	May 23	May 16	May 9	May 2
Financial Times				
Govt. Secs.	[illegible]	[illegible]	[illegible]	[illegible]
Fixed Interest	[illegible]	[illegible]	[illegible]	[illegible]
Industl. Ord.	[illegible]	[illegible]	[illegible]	[illegible]
Gold Mines	[illegible]	[illegible]	[illegible]	[illegible]
Dealings mkd.	[illegible]	[illegible]	[illegible]	[illegible]
F.T. Actuaries				
Ind. Group	[illegible]	[illegible]	[illegible]	[illegible]
500-Share	[illegible]	[illegible]	[illegible]	[illegible]
All-Share	[illegible]	[illegible]	[illegible]	[illegible]
20-year Govt.	[illegible]	[illegible]	[illegible]	[illegible]
Red. Deb.	[illegible]	[illegible]	[illegible]	[illegible]

REGIONAL MARKETS

Following the merger last year of U.K. stock exchanges, a selection of the shares previously shown under regional headings is presented below with quotations on London. Irish issues, most of which are not officially listed in London, are shown separately and with prices as on the Irish exchange.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

OVERSEAS MARKETS

Canada higher in light trading

BY OUR CANADA CORRESPONDENT

TORONTO, May 26.

WITH THE exception of utilities, which shed 0.27 to 131.59 on index, all sectors finished higher in light trading on Canadian Stock Markets to-day.

Golds advanced 9.98 to 423.98 on index to lead other sectors to moderate improvements. Industrials firmed 0.20 to 187.59. Base Metals 0.18 to 73.96, Western Oils 0.70 to 181.57, Banks 0.33 to 263.40 and Papers 0.44 to 110.98.

Among gold shares, Dome Mines gained $1 to $53¼, Camflo Mines rose $⅜ to $14¾ and Campbell Red Lake put on $⅜ to $33¼.

Union Gas closed unchanged at $7⅞—despite a lack of company news 118,200 shares were traded, including a block of 106,300 at $7½.

Francana Oil and Gas lost $¾ to $9½, as did Traders Group "A" to $13⅞, but Falconbridge Nickel rose $½ to $36½, Canadian Tire "A" gained $½ to $49½ and Acres put on $½ to $83.

New York Stock Markets were closed yesterday for Memorial Day.

OTHER MARKETS

PARIS—The market was steady after a hesitant opening, encouraged by the start of drilling in the Mer d'Iroise in the absence of other factors with London and Wall Street closed.

Oils were strong, Motors and Foods were well maintained, while most other sectors were narrowly mixed.

Denain firmed Frs.0.5 to 165.5 after announcing a rights issue. Lafarge stiffened Frs.0.3 to 173.1 following turnover announcement.

Foreign stocks were irregular, with German Industrials lower.

BRUSSELS—The market was generally firmer on Wall Street's pre-weekend gain, but trading was fairly quiet.

Local issues to rise included Sofina, Gevaert, GB-Inno-BM, Cometra, Asturienne and Acec. But Sidro, Tracelec and Hoboken each fell back.

In the Foreign sector, Germans were lower, U.K. Stocks were irregular, Dutch, French and U.S. issues were firmer and Golds also were generally higher.

AMSTERDAM — Dutch Internationals firmed, led by Akzo, up Fls.0.6 at 40.8, and Unilever, up Fls.1.0 at 105.2. Sentiment was aided by Wall Street's recovery last Friday.

Elsewhere, the market was generally lower in dull trading, with sentiment depressed by a negative corporate news background.

Losses were led by Ennia, Gist-Brocades, Heineken and Bergoss. But KNSM, Fokker and CSM each firmed.

Insurances, Shippings and Banks were mixed.

State Loans were narrowly mixed.

MILAN — Irregularly higher in still somewhat reserved trading on pre-Electoral considerations.

Assicurazioni Generali, Snia Viscosa, Fiat, Generale Immobiliare and Anic each gained ground, but Bastogi, Pirelli E. C. and Stet each tended lower.

Bonds were resistant in very quiet trading.

SWITZERLAND—Swiss issues remained mixed in fairly active trading.

Banks and Insurances firmed, Financials and Industrials were mixed, while Chemicals declined. Electrowatt rose Frs.40 to 1,990 but Motor Columbus fell Frs.30 to 1,080.

GERMANY—Shares fell considerably in nervous trading owing to revised Government forecasts of this year's German economic performance.

Among Banks, Deutsche dropped DM7 to 321 ex dividend, Commerzbank fell DM3 to 199, Dresdner lost DM5.30 to 227.6. Chemicals shed up to DM3.20 led by BASF at DM135.1.

Engineerings were down, with GHH off DM7.50 at 159.0.

In Motors, VW lost DM3.80.

Siemens gave way DM6.50 to 253 and Mannesmann DM6 to 258. Conti Gummi, which announced a 1974 net loss, dropped DM3.50 to 71.0 and Thyssen fell DM2.50 to 71.2.

Public Bonds were between DM0.20 lower and DM0.40 higher, with losses predominating. The DM660m. 8-year 8¼ per cent. Federal loan received its first official quote at DM0.30 above its DM99.50 issue price.

STOCKHOLM—Irregular trend.

OSLO—mainly quiet.

VIENNA—Quiet but steady.

COPENHAGEN — Generally lower in very active dealings.

TOKYO — The market recovered following last Friday's gains on Wall Street. Volume 120m. shares.

Electricals, Motors and some Blue Chips rose.

Dredgings, Housings and anti-Pollution Equipments were sought on reports that the Government may introduce further anti-recession measures next month.

JOHANNESBURG—Gold shares were firmer in a small turnover. Interest was generally on local account with Marginal and Speculative shares gaining between 10 and 20 cents. Heavyweights gained up to 50 cents.

Financial Minings were generally steady, Platinums occasionally higher, while Coppers were little changed.

Industrials were steady.

AUSTRALIA—Generally steady to firm. Although the All-Ordinaries and Metals and Minerals Indices hit new highs, the pace of the market's advance slowed, with profit-taking in some sections after last week's gain.

BHP finished 2 cents weaker at $A6.78, as did CSR at $A4.50.

Among Mines, Pancontinental shed 35 cents to $A3.40, but Queensland Mines and Central Pacific each gained ground.

Banks were firmer. Bank of NSW advanced 20 cents to $A6.60 and ANZ were 10 cents higher at $A7.10.

COMMODITIES

All U.K. markets were closed owing to the Spring Bank Holiday. U.S. markets were closed owing to the Memorial day Holiday. Trading was also suspended in the Sydney wool markets and will not re-open until to-morrow.

CANADIAN MARKETS

WINNIPEG, May 26.

WINNIPEG commodity market was very quiet reflecting the holiday in the U.K. and the U.S. Rapeseed and flaxseed were generally lower. Rye was inactive in the morning and rallied on news of Finland coming into the market for 20,000 tons of Canadian rye. Barley was lower while oats finished the day about unchanged. Wheat closed generally higher.

WINNIPEG, May 26. ††Rye—May 226½ (217), July 223 (219½), Oct. 215½ asked, Dec. 210 bid.

cOats—May 167½ (167½), July 164⅛ asked (164½), Oct. 155½ asked, Dec. 153 nom.

§Barley—May 238½ (236½), July 229 (230½), Oct. 215½ bid, Dec. 211 bid.

dFlaxseed—May 806 bid (830), July 813 (831½), Oct. 799 bid, Nov. 778½ bid, Dec. 735 asked.

Wheat—SCWRS 13.5 per cent. protein content St. Lawrence 475½ (476½).

††Cents per 56-lb bushel ex-warehouse, 5,000 bushel lots. c Cents per 34-lb bushel. § Cents per 48-lb bushel ex-warehouse, 5,000 bushel lots. d Cents per 56-lb bushel ex-warehouse, 1,000-bushel lots.

JUTE

CALCUTTA JUTE—Steady. Indian June Rs.465.00, Dundee Daisee June Rs.425.00 values. A bale of 400 lbs.

EUROBONDS

Nippon Telephone D-Mark loan

BRUSSELS, May 26.

NIPPON TELEPHONE and Telegraph Public Corporation is floating a DM100m. 8¾ per cent. seven-year Eurobond with pricing expected at 99 per cent., market sources said. Lead manager is Deutsche Bank and the loan carries a State guarantee.

The next loan is expected to be for Voest Alpine.

In the French franc sector, Caisse Nationale des Autoroutes will float a Frs.100m. to Frs.125m. loan this week, probably at 10 per cent. for seven years, they said.

Marriot Corp. is expected to be the next U.S. borrower on the market following Gould International's current $20m. 9¾ per cent. eight-year bond.

*

The City of Kobe will issue a DM50m. 8¾ per cent. five-year bond guaranteed by the Japanese Government through a private placement in the West German capital market, the Japanese Finance Ministry said in Tokyo. It added that an agreement will be signed in Frankfurt on May 28 between the City and Deutsche Bank.

Oesterreichische Drau-Kraftwerke will float a Frs.60m., 8 per cent., 15-year loan between June 4 and 9 at an issue price to be fixed later, banking sources said.

Reuter

Three Japanese banks will extend an $85m. syndicate loan to P. T. Teijin Indonesia Fiber Corp. (TIFICO), Sanwa Bank, said. The other two banks are Fuji Bank and Bank of Tokyo.

The loan will be repayable in seven years after a three-year grace period, bank officials said. They declined to disclose the interest rate, but indicated it would range between 1.5 and 2 percentage points over the Euro-dollar rate. Funds for the loan will be raised from 16 banks in the U.S., Canada, Europe and Hong Kong, Sanwa Bank said.

TIFICO, 80 per cent.-owned by Teijin and 20 per cent. by Toyo Menka Kaisha, both of Japan, plans to use the funds to help construct a polyester filament and staple plant in West Java. It is expected to begin operations in 1976.

AP-DJ

VW accounts to be opposed

DUESSELDORF, May 26.

THE GERMAN Association for the Protection of Shareholders said it will oppose the approval of Volkswagenwerk's 1974 accounts at the company's annual meeting on July 8. The managing and supervisory boards cannot expect a vote of confidence from private shareholders in view of the 1974 record group loss of more than DM800m., the Association said.

The German Federal Government and the state of Lower Saxony each hold 20 per cent. of VW's DM900m. capital, with the rest spread among individual shareholders.

Reuter

● Sperry and Hutchison's first quarter earnings (down from 33 to only 4 cents) reflected severely depressed conditions in the furnishings industry.

But the Green Stamp division recorded its third consecutive quarter of earnings improvement against year-earlier periods.

● Rexnord second quarter sales of $148.5m. generated earnings of $7.2m. compared with $129.9m. and $4.8m. respectively for the previous corresponding record quarter in 1974. Earnings per share were $1.18 compared with 76 cents.

● Singer has declared a quarterly dividend of 10 cents a share.

● Rockwell International has declared a $0.50 quarterly dividend.

Indices

NEW YORK

DOW JONES AVERAGES

Close	Home Bonds	Transport	Indus	Util.	Trading volume† 000's
May 23	67.29	167.92	831.90	77.17	—
22	67.90	166.37	818.91	77.23	17,610
21	67.94	166.42	816.68	77.17	13,640
20	67.86	168.22	830.49	78.03	13,310
19	67.96	169.66	837.69	78.16	17,870
16	67.95	168.80	837.61	78.16	16,650
15	67.64	170.59	848.80	78.86	27,690
14	67.61	175.47	858.73	78.20	29,060
13	67.65	172.36	850.13	78.64	24,450
12	67.61	171.38	847.47	78.48	22,410
9	67.64	171.91	850.13	77.90	26,440
8	67.59	170.72	840.50	76.57	22,980
7	67.68	170.85	836.44	75.47	22,250
6	67.65	171.50	834.72	75.25	25,410
5	67.54	174.12	855.60	75.14	22,370
2	67.32	171.98	848.48	74.64	25,210
1975 High	69.92 (4/4)	174.12 (5/5)	858.73 (14/5)	81.96 (21/1)	—
Low	66.16 (5/1)	146.47 (2/1)	632.04 (2/1)	72.02 (2/1)	—
All-time High	—	279.88 (7/2/69)	1051.70 (11/1/73)	163.32 (20/4/65)	—
Low	—	13.23 (8/7/32)	41.22 (8/7/32)	10.58 (28/4/42)	—

† Excluding bonds.

IND. DIVIDEND YIELD p.c.

May 20	May 9	May 24, 1974
4.61	4.54	4.49

N.Y. SE ALL COMMON INDEX

December 31, 1965=50.

1975	May 23	May 22	May 21	May 20	May 19
48.52	47.86 (4/1)	48.05	47.45	47.27	47.88	47.80

RISES AND FALLS

	May 23	May 22	May 21	May 20
Issues traded	1,862	941	447	414
New Highs	54	51	52	101
New Lows	6	5	4	4

AMERICAN SE MARKET VALUE INDEX

Starting base 100 Aug. 31, 1973.

[illegible]					

STANDARD AND POORS U.S. STOCK INDICES

	*Industrials	†Composite
May 23	102.12	90.58
22	100.72	89.39
21	100.38	89.06
20	101.51	90.07
19	102.06	90.43
16	101.93	90.43
15	103.06	91.41
1975 High	104.04 (14/5)	92.27 (14/5)
1975 Low	77.71 (8/1)	70.74 (8/1)

* 425 Industrials. † 525 Industrials, 50 Utilities, 25 Rails.

STOCK AND BOND YIELDS

	May 22 1975	May 14 1975	May 8 1974
Ind. Ord. yield pc	3.76	3.63	3.39
Ind. Ord. p/e ratio	10.30	10.75	11.63
Long-term Govt. Bds. per cent.	5.89	6.00	6.73

FRIDAY'S ACTIVE STOCKS

	Stocks traded	Closing price	Change on day
Sony Corp.	305,300	11	+¼
Amer. Tel. and Tel.	202,100	49¾	+¼
Teleprompter	174,500	6¼	+½
Lockheed	152,300	11¼	+2⅜
RCA Corpn.	146,300	19¼	+1
Texas Utilities	126,300	21	+¼
Texaco	120,300	24½	—
Safeway Stores	117,100	45⅜	+⅜
Honeywell	116,900	36	+1⅞
Intnl. Flavour and Fragrance	114,100	30½	−¼

TORONTO

INDUSTRIAL INDEX

May 26	May 23	1975 High	1975 Low
187.59	187.39	193.85 (14/5)	151.41 (2/1)

MONTREAL

INDUSTRIAL INDEX

May 26	May 23	1975 High	1975 Low
[illegible]			

COMBINED INDEX

May 26	May 23	1975 High	1975 Low
[illegible]			

JOHANNESBURG

	May 26	May 23	High	Low
Industrials	[illegible]			
Golds	[illegible]			

1958=100. Source: Rand Daily Mail.

MELBOURNE YIELDS

Av'ge yield on 50 Leading Stocks	May 23	May 22	May 16
On Dividends	7.58	7.58	7.65
On Earnings	14.44	14.44	14.50

SYDNEY ALL ORD. INDEX

May 26	May 23	High 1975	Low 1975
372.41	369.84	372.41 (26/5)	288.88 (9/1)

TOKYO NEW SE INDEX

Base=100 January 4, 1968.

May 26	May 23	High 1975	Low 1975
330.59	330.00	332.96 22/6	268.24 (10/1)

HONG KONG INDEX ●

May 23	May 22	High 1975	Low 1975
323.64	326.89	336.25 (21/5)	160.42 (8/1)

SINGAPORE INDEX §

May 23	May 22	High 1975	Low 1975
244.60	247.92	268.69 (11/5)	153.26 (3/1)

EUROPE

	May 26	Previous	1975 High	1975 Low
Belg'm (a)	110.86	109.25	111.51 (16/5)	89.07 (2/1)
Denm'k (b)	90.02	90.35	90.66 (22/5)	75.06 (15/1)
France (c)	66.5	66.3	72.5 (25/4)	51.70 (2/1)
Germ'y (e)	664.20	679.8	726.1 (15/4)	575.5 (2/1)
Holland (f)	[illegible]			
Italy (g)	[illegible]			
Spain (n)	[illegible]			
Sweden (i)	[illegible]			
Switz'l'd (j)	[illegible]			

Indices and base dates (all base values 100 except NYSE All Common—50; Standard and Poors—10; and Toronto—1,000; the last named based on 1975). [illegible]

OVERSEAS SHARE INFORMATION

NEW YORK

Stock	May 23	May 22
[illegible]		

Investment premium based on $2.60 per £1 105½% (106½%)

CANADA

Stock	May 23	May 22
[illegible]		

GERMANY ◆

May 26	Prices Dm.	+ or −	Div. %	Yld. %
A.E.G.	78.7	−3	—	—
Allianz Versich.	465	−5	17	1.8
B.M.W.	219	−3.5	14	3.2
BASF	135.1	−3.2	17	6.3
Bayer	117.8	−2.7	17	6.8
Bayer Hypo.	331xd	+11	18	2.7
Bayer Vereinsbk.	314xd	−5	18	2.7
Commerzbank	199	−3	17	4.3
Conti. Gummi	71	−3.5	—	—
Daimler	299	−1	16	2.5
Degussa	226xd	−6.5	18	4.3
Demag	185	−4	16	4.3
Deutsche Bank	321xd	−17	20	3.1
Dresdner	227.6	−5.5	16	3.9
[illegible]				

AMSTERDAM

May 26	Price Fls.	+ or −	Div. %	Yld. %
Ahold (Fl.20)	105xd	+3	16	3.4
Akzo (Fl.20)	40.8xd	+0.6	20	1.0
Algem Bnk (Fl100)	350.5xd	+1.5	40	6.0
AMAS NV (Fl.10)	13	−1	10	7.7
AMEV (Fl.20)	65.5	−0.5	30	4.6
Amro Bank (Fl.20)	79.0xd	−1.1	20	6.1
Van Berkels (Fl.50)	124	−2	15	6.0
Bijenkorf (Fl.20)	82.8xd	−0.2	21	5.1
Boka Westm. Fl.10	109.8	+0.8	52	4.7
Buhrm-Tetterode	71.5		25	5.2
Elsevier (Fl.20)	491	−1	24	9.8
EuroComTst Fl.10	69xd	−1		5.1
Gist Brocade Fl.10	70.5xd	−1.5	23	3.3
Heineken (Fl.25)	158.3	−1.7	14	2.2
[illegible]				

AUSTRALIA

May 26	Aust. $	+ or −
Acrow Australia	†0.68	—
Adelaide Brighton Cem't 50c	†0.85	—
Allied Mfg. Trdg. Indust $1	†1.50	—
Ampol Exploration	‡0.51	—
Ampol Petroleum	†0.41	−0.01
Assoc. Minerals	†2.80	—
Assoc. Pulp Paper $1	†0.78	
Aust. Con. Industries	†1.40	—
Aust. Foundation Invest.	†0.75	+0.02
A.N.I.	†0.80	−0.02
Aust. Oil & Gas	†0.07	+0.01
Blue Metal Ind.	†0.75	−0.05
Bougainville Copper	†1.13	+0.03
Broken Hill Proprietary	†6.78	−0.02
[illegible]		

TOKYO ¶

May 26	Price Yen	+ or −	Div. %	Yld. %
[illegible]				

PARIS

May 26	Price Frs.	+ or −	Div. Frs.	Yld. %
[illegible]				

MILAN

May 26	Price Lire	+ or −	Div. Lire	Yld. %
[illegible]				

BRUSSELS

May 26	Price Frs.	+ or −	Div. Frs.	Yld. %
[illegible]				

STOCKHOLM

May 26	Price Kroner	+ or −	Div. Kr.	Yld. %
[illegible]				

OSLO ◆

May 26	Price Kroner	+ or −	Div. %	Yld. %
[illegible]				

SWITZERLAND ◆

May 26	Price Frs.	+ or −	Div. %	Yld. %
[illegible]				

COPENHAGEN

May 26	Price Kroner	+ or −	Div. %	Yld. %
[illegible]				

VIENNA

May 26	Price %	+ or −	Div. %	Yld. %
Creditanstalt	380xd		10	2.7
Perlmooser	365		12	3.4
Selecta	735.75	+1.00	48	6.5
Semperit	168	+2	4	2.1
Steyr Daimler	157		9	5.8
Veit Magnesit	405	+5	22	5.4

JOHANNESBURG

MINES

Anglo American Corp.	4.85	
Buffels	22.25	+1.25
Charter	13.40	−0.05
[illegible]		

INDUSTRIALS

[illegible]		

SPAIN ◆

	Per cent.	
[illegible]		

SINGAPORE STOCKS

	May 23	May 16
[illegible]		

HONG KONG

Hong Kong $	May 23	May 16
[illegible]		
Jardine Matheson	28.20	25.20
Jardine Secs.	8.10	7.75
Lombard Insurance	†80.00	80.00
Rubber	†1.56	†1.47
Sime Darby	6.20	6.50
Southn. Pac. Prop.	1.23	0.64
Southsea Textile	13.00	12.80
Swire Industries A	14.00	14.50
B	2.80	2.70
Swire Pacific A	7.30	7.45
Textile Alliance	8.30	8.80
Textile Corp of Hong Kong	6.30	5.30
Wheelock Marden	3.60	3.40
Wheelock Maritime	2.90	2.60
Winsor Industrial	1.46	1.40
Wynncor	6.70	6.20

† Buyer. ‡ Seller. Xd Ex div.

AUSTRALIAN WEEKLY LIST

Australian $	May 23	May 16	Australian $	May 23	May 16
Advertiser Newspap'rs	†0.85	1.15	Kiwi Int.	†0.31	0.34
Ansett Transport	†0.70	†0.66	M.L.C.	†1.65	1.75
Assd. Securities	†0.56	†0.50	Mauri Bros.	†0.80	0.84
Aust. Guarantee	†1.42	1.37	Mayne Nickless	†1.40	†1.35
Aust. Paper M'nf'r'g.	†1.00	0.95	Nylex Corporation	†0.55	0.58
Boral	†1.75	†1.70	Olympic Cons.	†0.54	†0.54
Bramble Inds.	†1.35	1.27	Overseas Corporation	†1.10	1.06
Burns Philip	†1.78	†1.85	Petersville	†0.22	†0.21
Carpenter (W.R.)	†1.20	†1.15	Queensland Cement	†1.24	1.23
Castlemaine Perkins	†3.20	†3.12	QBE	†0.58	0.57
Coal & Allied	†2.20	2.03	Rocla Industries	‡0.90	0.89
Commercial Bank	†2.75	2.47	Swan Brewery	†1.31	†1.25
Commercial Union	†0.30	0.39	TV Corporation	†2.15	‡2.25
Commonw'lth Mining	†1.95	‡1.95	Thiess	†2.30	2.15
Grace Bros.	†1.28	†1.17	Thomas Nat. Trans.	†1.10	1.01
Hardie Asbestos	†3.20	3.02	Tooheys	†1.35	1.27
Herald & Weekly	†1.75	1.69	Travelodge	†0.26	0.25
Humes	†0.64	0.60	Woodside Burmah	†0.61	0.69

† Buyer ‡ Seller

AUTHORISED UNIT TRUSTS

♥Acrum. Units	21.8	23.2	...	2.34
♥C.J. Income	28.4	30.4	......	8.08
♥C.J. Euro Fin.	27.0	28.8	......	2.38
♥Accum. Units	28.8	30.8	...	2.38
♥C.J. Fd. Inv. Tst	25.0	26.8	......	3.20
♥Accum. Units	26.6	28.4	......	3.20

Prices on May 14. Next sub. day May 21.

(a) Confederation Funds Mgt. Ltd.
120, Regent St., W1R 6AY. 01-437 8040

♥Growth Fund	24.3	25.5	......	5.88

Cosmopolitan Fund Managers
47/57 Gresham St. EC2V 7EP 01-600 4747/8

CosmopolnGth Fd.	18.6	20.0	+0.1	5.58

Coyne Investment Mngt. Ltd.
72-80, Gatehouse Rd., Aylesbury. A'y 5941.

Coyne Fund	24.9	26.2	+0.2	4.80

Deal ‡Mon *Tues **Wed ‡Thur **Fri.

(a) (g) Key Fund Managers Ltd.
25, Milk Street EC2V 8JE 01-606 7070

♥KeyCapitalFund	53.2	56.6	−0.1	4.20
KeyExempt Fund	69.0	73.4	......	—
♥KeyIncomeFnd	53.9	57.3	......	8.45
♥Key P.I.F.	63.8	67.5	−0.2	4.19

Kleinwort Benson Unit Managers
20, Fenchurch Street. E.C.3. 01-623 8000

♥K.B. UnitFd.Inc	56.1	61.5	......	4.06
K.B. UnitFd.Acc	63.9	68.9	......	4.06

L & C Unit Trust Management Ltd.
The Stock Exchange EC2N 1HP 01-588 2800

♥L.&C.UnitTrust	82.3	84.9	+3.2	2.84

N.C.Income Fund	116.8	124.0xd	−0.5	6.05
N.C.Internat. Fd.	91.0	96.8	...	2.04
N.C.SmlCoys. Fd.	94.9	100.9	−0.2	4.27

Norwich Union Insurance Group
P.O. Box 4, Norwich, NR1 3NG 0603 22200

NorwchUGpTtFd My21	201.1	211.7	......	6.45

(a) (g) Oceanic Managers
3-5, Norwich Street, E.C.4. 01-353 6212

OceanicExem'pFd	48.4	50.4xd	......	5.90
♥Financial	37.4	39.8	−0.3	4.47
♥General	17.9	19.0xd	+0.1	4.56
♥Growth Accum.	29.5	31.3xd	......	5.84
♥Growth Income	26.3	27.9xd	......	5.84
♥High Income	20.7	22.0	+0.1	9.31
♥I.T.U.	18.3	19.4	−0.1	5.63
♥Overseas	24.3	25.8	+0.2	3.74
♥Performance	40.6	43.2xd	−0.1	4.88
♥Progressive	20.4	21.7	+0.2	6.64
♥Recovery	19.6	20.9xd	−0.2	6.59

Security Selection Ltd.
5 The Crescent Minories EC3N 2LY 480 6313

Univ.Grth Tst Acc	23.1	24.4	......	3.76
Univ.Grth Tst Inc	21.9	23.1	......	3.76

Slater Walker Tst. Mngmt.
47-57 Gresham St., EC2V 7EF 01-600 4747/8

(a) (g) Jessel Britannia Group

♥Jes'lAus&Un Fd.	40.7	42.3	......	5.39
♥Jes'lCity of Lon.	38.2	41.1	......	4.89
♥Jes'l Exempt Fd.	75.6	79.6	......	8.43
♥Jes'lGold & Gen.	158.7	170.6	−0.1	4.43
♥Jessel Inv. Units	24.8	26.7	−0.1	4.23
♥JesselNewIssues	26.3	28.3	+0.1	6.79
♥Jes'lPlant&Gen	39.5	42.5	−0.4	7.05
♥Jessel Prop&Gen	12.8	13.8	−0.1	3.63
♥Jessel Extra Inc.	27.6	29.7	+0.2	10.19
♥Jessel Com. Plus	62.1	66.8xd	−0.3	5.19
♥Jessel High Inc.	22.2	23.9xd	+0.1	12.78
♥J.L. Int. Fund.	21.5	23.1xd	......	5.65

OFFSHORE AND OVERSEAS FUNDS

INSURANCE, PROPERTY, BONDS

Money & Exchanges

Bank of England Minimum Lending Rate 10%
(Since May 2, 1975)

Short-term interest rates weakened for the most part in the London money market last week. Although the one-month sterling certificate yield was unchanged on balance, at 9⅝-9¾ per cent., the three-month fell to 10$\frac{1}{16}$-9$\frac{15}{16}$ per cent., from 10⅜-10¼ per cent., and the one-year to 11⅜-11¼ per cent., from 11⅞-11⅝ per cent. Day-to-day credit was in short supply throughout, in spite of the general downtrend in rates. The authorities gave an "exceptionally large" amount of assistance on Monday, buying a very large amount of bills, and lending a moderate sum to the Discount houses for one day at the Minimum Lending Rate of 10 per cent., while on Tuesday they bought a small amount of bills, on Wednesday a large amount, on Thursday a very large amount, and on Friday a moderate amount. The official bill purchases included buying a Treasury and local authority paper. At the Treasury bill tender, the average rate of discount was raised 0.0018 per cent. to 9.4765 per cent.

Sterling was stronger on the week, with its trade-weighted average depreciation against ten leading units since the Washington Currency Agreement of December, 1971 (as calculated by the Bank of England) narrowing to 24.6 per cent. by Friday evening, from 24.9 per cent. previously. In terms of the dollar, the pound gained 235 points to $2.3255-2.3265. The dollar's trade-weighted depreciation against 14 units since the Washington Agreement (as measured by Morgan Guaranty on noon rates in New York) widened to 7.17 per cent. by Friday, from 6.53 per cent., while sterling's depreciation on a similar basis narrowed to 29.92 per cent., from 30.27 per cent.

Gold rose $7 an ounce on balance in London, to $172¼-173¼. The Krugerrand ended in places at $209-211 (£90-91) in domestic dealings, against $198-200½ (£86-87), and at $177½-179½ (£76¼-77¼) in international, against $170½-172 (£74-74¾).

EXCHANGE CROSS-RATES

GOLD MARKET

FOREIGN EXCHANGES

May 23 1975	Bank Rates %	Day's Spread	Close
New York	8	2.3215-2.3328	2.3255-2.3265
Montreal	8¼	2.3890-.3965	2.3895 .3905
Amsterdam	8	5.56 5.58	5.57½ .58½
Brussels	7	80.80 81.10	80.95-81.05
Copenh'gen	8	n.a.	12.67½ .68½
Frankfurt	4½	5.41 .46	5.41¼ .42¼
Lisbon	8½	56.10 56.60	56.20 56.40
Madrid	7	129.30 129.7	129.45 129.65
Milan	8	1,448 1,454	1,450 .452
Oslo	5½	11.45-11.48	11.44 11.45

EURO-CURRENCY INTEREST RATES

OTHER MARKETS

FORWARD RATES

L.G. INDEX
GOLD 172¼-173¼

CORAL INDEX
Close 356-361

Base lending rates Page 31

FINANCIAL TIMES SURVEY

Tuesday May 27 1975

BRAZILIAN INDUSTRY

Brazil now produces well over a quarter of all the industrial goods manufactured in Latin America. The signs are that financial and political pressures and the need to redistribute income will make the expansion of the internal market the main spur to industrial growth in the future. But there is no indication that the country will lose its industrial dominance over the rest of the region.

Need for home demand

By HUGH O'SHAUGHNESSY, Latin America Correspondent

OVER THE past decade Brazilian industry has reached levels of development that few people could have foreseen at the end of World War II. The present industrial structure is principally due to the foresight of the Governments of the time in taking advantage of broad changes in world trade. The scarcities produced in the peripheral countries during World War II was a powerful boost to the establishment of the bedrock of industrial production. Because Brazil could not import the goods that it had hitherto relied on obtaining from the industrial countries of the North Atlantic it started to make them at home. This impetus was maintained long after the former suppliers were again in a position to send to Brazil what they had previously sent. Behind a tariff wall which became progressively more difficult to mount foreign competition was prevented from reaching those parts of the domestic market that Brazilian manufacturers themselves felt they could satisfy.

Multiplied

In the course of this process which lasted until only a few years ago the variety of products which Brazilian manufacturers became able to produce behind tariff barriers multiplied from the simplest processed foods and domestic equipment to a whole range of automotive products and eventually simple airframes.

At the same time Brazil tentatively began to enter the export market. Taking advantage of cheap labour for handworked goods, cheap raw materials—as was the case with soluble coffee, furniture and shoes — and the international connections of the foreign multinationals which owned the lion's share of the biggest factories Brazil took advantage of the upswing in world trade which came about in the 1960's. Spurred by the need to export in order to pay for the growing volume of imports of sophisticated goods required for a vast expansion, and the need for foreign exchange to service increasingly huge foreign investments and borrowings the past few years have seen Brazil engaged in an Export or Die Campaign only comparable to the British experience after World War II. Tax incentives, rebates of duty, the construction of "export corridors" to facilitate the passage of exports from their point of origin to the waitings ships, the establishment of eager commercial representation abroad and a growing traffic in industrial fairs all spurred the manufacturers to an export frenzy.

Now however there are signs that the strategy is once again changing and that 1975 could be the beginning of a new stage in the industrial development of the country.

The present faltering of world trade has made the prospects for the continuance of the export-led industrial boom more problematical. The old days when world trade gave the impression of being likely to go on expanding *ad infinitum* and creating an inexhaustible demand for industrial goods which Brazil would be ever more efficient at producing are over. As explained elsewhere in this survey the pall of foreign protectionism is hanging over the once bright prospects of the textile industry and the shoe industry as the industrialised nations look with alarm at their own balance of payments.

In the financial sphere the strategy of relying heavily on foreign investors and foreign financiers is proving to be such a burden as to create demands for it to be modified. Not only has it placed too great a financial burden on the country's ability to pay, it has awoken no little local resentment at the increasing control of the Brazilian economy that is exercised by foreign interprises.

In the political sphere the process of industrialisation has been identified with the policies of the least liberal of Brazil's recent military masters.

The concentration of industrial power in cities like Sao Paulo has gone hand in hand with the enrichment of a few and continuing bad living conditions for the many and with the increasing disparities between the more and the less developed regions of the country. For all these reasons the present Brazilian leader General Ernesto Geisel has seen the political necessity of changing the modes of development and with them the strategies for industrialisation before Brazil reaches the point of financial and social crisis.

It is virtually certain that Brazil is about to launch into a period where the principal spur for the manufacturer will not be the foreign market, whose doors are in danger of being shut to him, but the cautious expansion of the buying power of the local market. The room for such expansion is immense. There are tens of millions of Brazilians who are virtually outside the money economy, particularly in the North-East, and tens of millions more who are on the borderline between poverty and a reasonably adequate living standard. The provision of reasonable incomes for these people, though the complete process will take several decades could very well make up for the restrictions that foreign markets are now placing on the products of Brazilian factories.

This in its turn may well reduce the degree of dependence that Brazil has on the transnational companies. Though they will doubtless continue to grow and prosper their role in finding and guaranteeing overseas markets—undertakings which the motor manufacturers have been specially obliged to assume—will be less essential for Brazilian development.

A process likely to grow in parallel with this trend is the continued fast growth of the State sector of the economy. The State is, despite Brazil's commitment to capitalist rather than socialist moulds of political thought, by far the biggest force in industry, whether one is talking about the energy sector or the steel industry. It alone in Brazil has been able to amass the funds needed to make the really big industrial investment.

Two new factors are likely to consolidate the pre-eminence of the Brazilian State over the Brazilian private investors. First, much if not all of the newer technologies which are hand reared in Brazil—for example the aircraft industry or the nascent electronics industry —are the result of the Government taking strategic decisions which private enterprise was never in any position to take. The electronics industry has begun to come into its own this year principally as a result of decisions taken by the Brazilian Navy based on the needs to service their own equipment while the push towards the establishment of an airframe industry came from the Brazilian Air Force.

The State sector is also likely to become more dominant if, as seems certain, the Latin American attitudes to foreign transnationals hardens and there are moves to establish powerful locally owned multinationals in the region. The United Nations Economic Commission for Latin America (ECLA) meeting in Port of Spain earlier this month came out in favour of such a scheme, particularly for the capital goods, hemicals and consumer durables sectors in the light of the fact that Latin America as a whole is importing more than $11bn. worth of such products every year from the U.S., the EEC and Japan.

The idea of establishing Latin American multinationals was also endorsed by the Inter American Development Bank at its recent meeting in Santo Domingo, and the bank is pledged to spend much of the $500m. which Venezuela placed at its disposal in a trust fund to push ahead with likely schemes. In New York, the United National Development Programme under the direction of Sr. Gabriel Valdes, is working on concrete plans for such enterprises, the first two of which will be angled towards petrochemical production and the development of new industrial technologies for Latin America.

Enterprises

As the biggest industrial power in Latin America Brazil will be called upon, and will doubtless accept, the invitation to participate in the foundation of such new enterprises. With a growth rate of 8.9 per cent in the first three years of the 1970s and a 13.7 per cent growth in 1973 Brazil already accounts for no less than 28 per cent. of Latin America's total output of manufactures.

Though the pace of overall development is sure to slow down from the dizzy speeds it reached in the immediate past and though there is a growing consciousness in Brazil that the farm sector must start getting some of the close attention from the Government that industry has been monopolising over the last decade, all the indications are that Brazil will continue for the foreseeable future to retain the leadership in Latin America's push towards industrialisation.

Providing the finance

TO CARRY OUT its 2nd National Development Plan, which covers the four-year period 1975-79, Brazil needs to make total investments to the value of U.S.$100bn., of which U.S.$40bn. are to be channelled into the industrial sector. *These figures show that Brazil* has taken on a very ambitious programme for a country with a present GDP of about U.S.$80bn. and a per capita income of about U.S.$800. Gross fixed investments of about U.S.$14bn., were made in Brazil last year: the aim is now to increase these investments to an annual average of U.S.$25bn. over the next four years. This is a considerable leap, and there are inevitably questions as to the precise sources of the additional funds for these investments.

The Minister of Planning, Sr. Reis Velloso, has claimed that 20 per cent. of these resources, that is about U.S.$20bn. over the four years, will come from abroad. This is an optimistic estimate, given present conditions on the international capital market. However, Brazil's prospects are relatively good, for direct investments and loans to the value of U.S.$5.6bn. entered the country last year, and loans worth U.S.$1.4bn. have already been contracted in the first quarter of this year. The recent change in Brazilian legislation to allow foreign capital on the stock markets will also help to some degree.

Amortisation

Nevertheless, it is clear that most of the foreign resources will come in the form of loans, not investments, and there are evident disadvantages in relying heavily on this kind of foreign financing. The most important is the vicious *circle that stems* from a very large foreign debt. The more resources sucked up in amortisation payments and interest rates, the greater the need to increase the debt to cover these commitments. Brazil's gross foreign debt, currently about U.S.$19bn., about one quarter of the GDP, is undoubtedly very high and will cause serious difficulties unless the country manages to increase its exports to much higher levels than last year's U.S.$7.9bn.

It is inside the country, however, that four-fifths of the funds are to be raised. And what are prospects there? Even with foreign capital, the stock markets in Rio de Janeiro will be able to cover only a very small portion of the country's needs, not much more than 5 per cent. Private financial institutions provide some of the necessary resources: altogether it is estimated that they supplied about a quarter of the total investments of U.S.$11bn. in 1973 and U.S.$14bn. in 1974. Over three-quarters of these investments *come from the building* societies, while the share of the investment banks in the total is very small, less than 2 per cent. Indeed, apart from repass operations with government funds, the investment banks supply about 30 times more resources for working capital and short-term loans, than for investment purposes: which alone shows that they are not fulfilling the function for *which* they were created.

Another reason why the private sector does not directly provide a larger share of investment capital is the large proportion of total private resources in the hands of the finance companies, whose activities are mainly geared to financing hire purchase operations. The net value of the bills of exchange in the hands of these companies shot up from U.S.$3.7bn. in 1972 to U.S.$6.8bn. in 1974. It is possible to make an approximate calculation of most of the debts owed by the general public by adding this sum to the loans made by the National Housing Bank and the building societies. This figure reached U.S.$13bn. in 1974: this is 22 per cent. of GDP, as compared with only 2.5 per cent. in 1966.

The high proportion of private resources in the hands of the finance companies acts as a powerful means of redistributing wealth from the bottom upwards, as the working class and middle sectors end up paying a very high price for their purchases. Although in the short term it artificially inflates demand for consumer goods, in the long term it channels resources into the higher income groups. As the distribution of wealth is already extremely unequal in Brazil, any factor that tends to increase this concentration will inevitably have a harmful effect on the domestic market.

Altogether, foreign resources and private enterprise do not provide more than about 40-45 per cent. of Brazil's gross fixed investments: the rest is provided by the Government. Over one-third of the resources come from three savings schemes (FGTS, PIS and PASEP) which are formed by obligatory deductions from wages and charges on companies for each registered worker. The funds eventually revert to the workers, who can withdraw them in exceptional circumstances. The importance of these schemes as a source of Government resources has grown enormously in recent years, for, while they contributed only U.S.$1.3bn. in 1971, *by 1974 they raised U.S.$5.4bn.*

Criticisms have been raised as to the use the Government makes of these funds, for it mainly channels them into investment loans for the private sector.

Resources

Indexed treasury bonds (ORTN) are the most important single source of resources—U.S.$4.8bn. in 1974. Next come the Government saving banks, which increased their deposits by over 100 per cent. in 1974, to U.S.$3.1bn. This rapid rise was partly the result of the bankruptcy of a well-known private bank, Halles, which shook public confidence in the private banking system.

Altogether, from the three workers' savings schemes, Government savings deposits, housing bonds, long-term bank deposits and indexed treasury bonds, the Government obtained U.S.$5.9bn. in 1972, U.S.$8.8bn. in 1973 and U.S.$13.8bn. in 1974.

To administer these and other government funds, large and efficient State-owned banks have developed. The expansion of the Banco do Brasil, in particular, has been phenomenal, with its capital growing 48 times in five years. By 1974 it was financing loans to the value of $US13bn., with 96 per cent. of these resources going to private enterprise. With its growth, the Banco do Brasil has also become more specialised. It is now mainly *concerned to develop* the country's rural sector and to support the export drive, opening new branches abroad and providing guarantees. Indeed, only 17 per cent. of its loans ($US2.2bn.) went to industry last year.

The reason for this is that BNDE, Banco Nacional de Desenvolvimento, the world's largest development bank, is increasingly taking over the Banco do Brasil's role in industry, as well as developing new functions in this sector. BNDE made loans to the value of $US2.9bn. last year, 80 per cent. of which went to industry. Moreover, within industry its main concern is now the private company. Whereas in 1968 its loans were more or less *equally divided* between private and State-owned companies, by 1973 86 per cent. of its loans went to private companies.

And BNDE no longer provides just loans. It increasingly participates directly in private companies, generally with a minority share in the capital. With this objective, it created last year three subsidiary companies—Fibase, Embratec and Ibrasa—to buy up shares in private companies operating in what is considered a priority sector — industrial inputs, particularly non-ferrous metals, chemical products, paper and pulp, and capital goods. BNDE will also be increasing its loans to this sector and, out of the bank's estimated total loans of $US3.2bn., about $US1.8bn. will be channelled to these sectors this year.

BNDE is now the country's largest shareholder, with a total participation of about $US2.6bn at the end of last year. Out of $US14bn. gross fixed investments last year in Brazil, BNDE provided about 10 per cent., about $US1.4bn. Moreover, it was involved in about 20 per cent. of these investments, as it nearly always provides 50 per cent. of the funds for a project, insisting that the other partners supply the rest.

In 1974, too, BNDE raised fresh resources worth $US1.6bn. Of this, 93 per cent. was obtained in Brazil and 7 per cent. abroad, mainly from the *London Bank Libra, and the* U.S. Morgan Guaranty Trust. Inside Brazil, its main source of funds are two of the forced savings schemes mentioned earlier (PIS and PASEP), which together supplied it with $US590m. last year. This year, BNDE is planning to double the resources it raises to $US3.2bn., of which $US1.6bn will come from the PIS and PASEP schemes alone.

Because of its considerable and growing economic power, the bank has been accused of gradually nationalising the economy. The Government replies, however, that it is the failure of private enterprise to channel investments into crucial sectors, such as capital goods, that makes the growth *of government financial institutions* inevitable.

However, whatever some Brazilian businessmen may feel the main problems that Brazil is facing in its development plan do not stem from the increasing power of the Government's financial institutions and nationalised companies.

Susan Branford
São Paulo Correspondent

Migrant workers

MIGRANTS FROM THE provinces still arrive in Sao Paulo at the rate of one every eight minutes. In January, February and March over 15,700 of them, mostly untrained and many uneducated, came in the trains and buses that have long been feeding the sprawling growth of the South-East region.

However, in the past year the migratory movement from the outlying areas and the *North-Eastern* backlands has begun to ease up, partly because industries have been able to absorb more workers elsewhere. At the end of last year Sao Paulo found itself with a shortage of unskilled labour, and employers vied with each other to attract new arrivals. The change in events brought higher pay, free housing and, for some (or so it is said), the *free services of prostitutes*, but the shortage turned out to be temporary.

The real shortage is not numbers but skills. It is one of the apparent paradoxes of Brazil that while many of the population are unemployed or under-employed—or if they are employed can expect no more than the legal minimum wage (many earn less)—the country is desperately short of manpower. The lack of qualified personnel from executive level downwards is one of the constant limiting factors in the growth of the "modern sector" of the economy. University professors, boilermen, nuclear physicists, cooks, and salesmen: you name it, Brazil is short of them.

Possession of a qualification automatically entitles a worker to wages well above the minimum, and thus the training of the workforce is an important move not only towards industrial expansion but also towards a wider distribution of wealth.

This concern clearly plays an important part in the present Government's development thinking, *which*, according to President Geisel, "after considerable conquests in the economic sector, is orientated, above all, towards social development." In a May Day address the general emphasised "the need progressively to improve our workforce, qualify it better, so as *either* to bring the worker better results from his labour, or for the country to grow with greater productivity."

The Government has earmarked $20m. this year for a special instruction scheme known as Pipmo (*Intensive Programme for* Manpower Training), aiming to qualify 450,000 people in skilled and semi-skilled jobs.

The army, which itself often fills the manpower gap in the more distant development projects, also takes part in training for civilian trades. According to an army expert in the Labour Ministry, it is hoped to qualify 15,000 soldiers for jobs in manufacturing and service industries this year. The recently reinforced armed forces are now 208,000-strong, and ex-army personnel are playing what seems to be an increasing role in the higher echelons of civilian business administration. Traditionally, the army has been the most effective vehicle of social mobility, particularly for the lower middle classes in the south of the country.

Full-time

Besides qualifying workers for jobs—for example in the steel industry, where they are urgently needed—the Government also plans to absorb large numbers of underemployed by ensuring an expansion of job opportunities. The five-year national development plan which started last year sets the target—and in the present economic situation it may be a difficult one—of a 3.5 per cent. annual growth, or 8.8m. jobs in five years. This is above the *anticipated growth of the work*-force, 2.5 per cent. a year or 3.7m. in five years, which means that 2.8m. people who are now not properly employed should be absorbed into full-time work.

However, the best available data—a 1972 survey by the Brazilian Geographical and Statistical Institute (IBGE)—show that as many as 5.9m. people, excluding the whole Amazon region, either earned no money from their agricultural labour or worked for money for less than 15 hours a week. This total was more than the number of industrial workers in the survey.

In the agricultural regions, where 44 per cent. of Brazilians work, information about the labour market is inadequate and vague. In the non-agricultural sector, IBGE figures show that of a workforce of 19.5m., 1.5m. *were unemployed, under*-employed or half-time workers who would rather work full-time.

With the lack of specialised skills, 43 per cent. of the workforce, according to the IBGE, earns the minimum wage or less. This level was increased by 41 per cent. at the end of last month to between $47 and $67 according to regions—the largest increase in the past 10 years. The rise went a small part of the way to restoring the purchasing power lost by this large proportion of Brazilian workers since the military took over from the Leftist Goulart government. Estimates of how far real earnings have dropped vary, but the trades union research institute DIEESE claims that the minimum would have to rise to over $175 a month before it equalled the level set in 1958.

However, the increase, which was well above the 25-26 per cent. official inflation rate over the previous 12 months, marked the first step towards narrowing the gross discrepancies in earnings. Though some were disappointed by the increase and by the fact that workers *still earn less in the provinces* than in Rio de Janeiro or São Paulo, the rise is thought unlikely to have drastic repercussions on the inflation rate, while further increases are slated for the future. The Government has tabled a law disconnecting the *minimum wage from the* system on monetary correction in which it has acted as a base currency for interest rates, rents and magistrates' fines.

Shortage

In the heavily industrialised regions last year's temporary labour shortage led to sharp pay increases, but the number of jobs on offer in the production sector has declined this year. The biggest demand remains for the highly skilled worker who can expect to earn five times minimum wages or more.

Despite this, labour costs even in advanced industries are still relatively low. Where in Britain or the U.S. they might account for 30-35 per cent. of total costs, in Brazil the proportion would be between five and 15 per cent. A semi-skilled car worker in the industrial belt of São Paulo—considered a good job—earns about $100 a month roughly half what a U.S. car worker can earn in a week.

Unions, which have faced systematic repression under the military, are generally weak organisations, although the Government has recently withdrawn its "interventors" from some of the more troublesome ones. Strikes are illegal and there has been no major stoppage since the Sao Paulo metalworkers struck in 1968. Dockers in Rio won their case for new working conditions in a go-slow last year, and car workers stage fairly frequent work-to-rules, but the Government has usually managod to prevent or overrule the election of militant candidates to union posts.

David White
Rio de Janeiro Correspondent

Development gap between regions

TWO REGIONS in particular in Brazil have traditionally been excluded from the mainstream of the country's process of economic development: the Amazon and the North-East. As has been observed in many other parts of the world, the very dynamics of national development; particularly industrial growth, tend to exacerbate regional differences, with the backward regions either quietly forgotten or exploited in a series of unequal trade exchanges in which they swop at a loss, raw materials for manufactured goods. In general terms it can be said that the first of the two destinies awaited the Amazon region after the collapse of the rubber boom in the 1920s; while the other alternative was the fate of the North-East.

These different forms of economic marginalisation are related to the population characteristics of the two regions. For the North-East is densely populated, containing about 30m. people—that is, 30 per cent. of Brazil's total population—although it covers only 18 per cent. of national territory. On the other hand, the Amazon region is still largely uninhabited; it covers 42 per cent. of the territory while containing about 3.8m. people, about 4 per cent. of the population. In other words, the main problem in the Amazon region has always been *exclusion* from the process of economic development; whereas in the North-East the chief difficulty lies in its *exploitation* by the more prosperous South.

Population

Because of the North-East's large population, its backwardness was the object of serious government studies considerably before comparable importance was given to the Amazon. In the late 1950s attention was drawn to the fact that the North-East was benefiting relatively little from the development boom that was occurring in the South, particularly in the State of São Paulo. with the growth of the country's industrial sector.

As a result, in 1960 the Government created SUDENE, the Superintendency for the Development of the North-East, to carry out an ambitious programme to develop the North-East's industrial sector, and thus wipe out regional differences in wealth. The cornerstone of this development programmes was an ingenious tax incentive scheme by which companies and individuals could deduct up to 50 per cent. of their income tax provided this money was invested in an approved project in the North-East.

The tax deduction scheme was extended, first to the Amazon region in 1966, with the creation of SUDAM, the Superintendency for the Development of the Amazon, and a year later to three economic sectors considered of priority importance (tourism, afforestation and fishing).

Deductions

The scheme has now been operating for over 14 years in the North-East and, by March 1975 1,100 projects had been approved. They involve total investments of £1.4bn., about half of which are to come from tax deductions. About nine-tenths of the projects are in the industrial sector.

By January 1975 SUDAM had approved 511 projects, with total investments of £540bn., of which £300bn. are to come from the tax incentives. About three-fifths of these projects are in the agricultural and farm husbandry sector, particularly cattle-raising.

SUDENE has clearly helped to channel resources in to the North-East, thereby contributing to the setting up of many of the region's present large industrial projects, in particular Brazil's second petrochemicals pole in the State of Bahia. The largest project ever approved by SUDENE was the £100bn. Projeto Petroquímico do Nordeste S.A., run by Petroquisa, the State-owned petrochemicals company.

Non-metallic minerals, electrical equipment, textiles and clothing are other industrial sectors to have received considerable support from SUDENE. For example, Ducal; which belongs to the group UEB (União de Empresas Brasileiras) is setting up Latin America's largest factory for men's clothing in Rio Grande do Norte. The factory will produce 15,000 articles of clothing each day and is to become part of a vertically integrated project which goes from cotton farming to a chain of 101 stores in Brazil's most developed States—São Paulo, Rio de Janeiro and Minas Gerais.

However, despite SUDENE's efforts, economic growth in the North-East is not even keeping up with the rest of Brazil. From 1960 to 1970 per capita income in the North-East doubled, to U.S.$350. But as a percentage of the per capita income for Brazil as a whole, it dropped from 47 per cent. to 41 per cent. In a similar fashion, the regional agricultural output decreased from 22 per cent. to 18 per cent. of the country's total, the regional industrial product from 8 per cent. to 6 per cent., and exports from 19.5 per cent. to 14 per cent.

These disappointing results are leading to a questioning of both the mechanism of the tax discount scheme at an operational level, and of the basic objectives at the level of policy guidelines.

At the operational level, the Government has recently taken measures to decrease the waste of valuable resources. Previously a large number of projects were approved, and there then turned out to be insufficient tax-deducted resources to cover them all. As a result many projects were abandoned or delayed (the official abandonment rate for SUDENE projects was 25 per cent. at the end of 1974); it also became a regular practice for the receiving company to pay the contributing company a large sum of money (at times up to 30 per cent. of the investment) before it could obtain the resources. To eliminate these distortions, which were practised in all five of the tax-deduction schemes, the Government has created special government-administered funds which will both handle all tax deductions of £5,500 or less and choose the projects to receive the funds.

At the level of policy guidelines increasing attention is being paid to criticisms which claim that SUDENE has concentrated nearly all its efforts in setting up industrial projects at the expense of agriculture, and, even within industry, in promoting capital-intensive, technically sophisticated projects for producing goods to compete on the foreign market. It is argued that this type of project has an extremely limited multiplying effect on the regional economy as a whole.

Indeed, all SUDENE's projects together, over the 11-year period, planned to create only 260,000 jobs, not even keeping up with the additional supply of labour entering the market each year. And not all these jobs will in fact be created now, as the figures do not take account of the jobs lost through abandoned projects. The investment cost of the new jobs is also extremely high, about £5,000 per job.

Indeed, the superintendent of SUDENE himself admitted in April that living conditions for the rural population in the North-east have not improved: "The economic development of the North-East has not benefited the people in the countryside. Most of the rural population still lives in a situation of relative and absolute poverty, with the worst off sectors suffering from malnutrition."

In another recent document the Government was even more candid: "The rural North-East, indeed, can still be characterised as the largest area of deeply rooted poverty and relative backwardness in Brazil and possibly in the whole of Latin America."

An FAO study of 1971 pointed to the highly-concentrated land distribution as the main cause of rural poverty. Indeed, there are 190,000 "latifundios," covering 157.5m. acres in the North-East; and, in Brazilian statistics, a "latifundio" is defined as a rural estate which is not being farmed rationally, given the prevalent farming methods. Thus it is scarcely surprising that 105 out of the North-East's 227.5m. acres are not being farmed, despite the thousands of land-hungry peasants. For, at the other end of the scale, 700,000 farms cover an area of 26m. acres, with an average size of 37 acres, which, given the North-East's farming techniques, is not enough to provide a family with an adequate income.

Landless

As to the Government's two main programmes for the rural North-East—PROTERRA and POLONORDESTE — together plan to expropriate only very small areas, settling in the foreseeable future just 15,000 out of the 3.4m. families (17m. people) of landless peasants, subsistence farmers and shanty-town dwellers. If these are recognised to be surviving on less than a living wage, then these programmes cannot be considered to be tackling the real problems of land concentration that problems of land concentration that lie in the way of regional development.

In all, SUDENE'S experience illustrates very clearly the difficulties in the way of any attempt to eradicate Brazil's regional inequalities through a type of industrial growth that is "imported" from the South and is not linked to a process of effective modernisation and development in the agricultural sector. Although SUDENE has been responsible for much of the region's industrial development. It has none the less done little, if anything, to improve the living conditions of the mass of the population. Indeed, the gap between the North-East and the developed South has widened—and will continue to do so, creating serious problems for the industrial sector because of the lack of a regional market, unless structural reforms are carried out in the agricultural sector. These lie outside the scope of a development agency such as SUDENE.

Susan Branford

Boost for chemicals

MORE THAN half the money Brazil earned last year from its coffee exports went to pay for fertiliser imports. Because of rocketing world prices, Brazil spent a sizeable U.S.$510m. on fertilisers in 1974, as compared with only U.S.$138m. the previous year. Although the value tripled, the volume only increased by 30 per cent. to 3.2m. tons. Another indication of the harmful effects on the Brazilian economy of last year's high world prices was the marked increase in farming costs: while in 1973 nine 60-kilo bags of soyabeans bought 1 ton of fertilisers, by 1974 it took 20 bags to buy the same amount.

Indeed, Brazil's experience last year showed the country to be uncomfortably vulnerable in this sector, particularly as one of the Government's priorities is to increase agricultural production so that primary exports can cover a larger part of the cost of imports. And, in Brazil's developed south, where nearly all the virgin land has now been occupied, the main way of increasing production is by a rise in productivity through the use of fertilisers. At present, consumption of fertilisers is low in Brazil: an average of 20 kilos per hectare, compared with 212 kilos in France and 400 kilos in Japan. Thus the dilemma for Brazil is that, with present fertiliser prices, it has to increase greatly the volume of its imports in order to step up exports: a sad case of the faster you run, the further behind you get.

The ideal way out of the impasse is clearly to increase domestic production of fertilisers. Luckily for Brazil this solution seems viable and, moreover, in the fairly near future. The heaviest import expense last year for a single fertiliser was the $200m. spent on 400,000 tons of phosphates, which was half of Brazil's total consumption.

This year, however, Sr. Shigeaki Ueki, Minister of Mines and Energy, triumphantly announced the discovery of a 350m.-ton reserve of phosphate rock in Patos de Minas in the state of Minas Gerais. The Government has speeded up mining procedures: the State-owned company, Cia. Vale do Rio Doce, has already formed a subsidiary, Mineraçao Vale do Paranaíba SA, to start mining these reserves as soon as possible. Initial annual production of 150,000 tons should begin next March, increasing to 400,000 tons by the end of 1977. The rock will be marketed to the fertiliser manufacturers in the form of a phosphate-concentrate containing 34 per cent. P_2O_5.

Nitrates

The other main fertilisers that are imported are nitrates and potassium. As part of a $1.3bn. fertiliser development plan, the Government intends to increase domestic production of nitrates by 1.3m. tons, and potassium by 1m. tons, by 1980.

The fertiliser manufacturers have drawn up ambitious plans on the basis of these predicted increases in the supply of raw materials. One of the large new projects is to be set up by Beker Industries, the U.S. company, in Paranaguá, in the state of Paraná. It is planning to produce 150,000 tons of phosphate products by the end of 1976, increasing eventually to a full capacity of 500,000 tons. Shell, too, has recently announced a new project in Paulínia in the state of Sao Paulo for the production of both "monocrotophs," a phosphate product used as a fertiliser, and insecticides and pesticides. It will be the second-largest plant of its kind in the world, with an annual production of 1,270 tons of "monocrotophs," and 50,000 tons of sprays. The initial investment is $17m., and the plant should start production at the end of next year.

Even heavier investments are being made in petrochemicals, however: $1bn. by 1978, and $1.5bn. by 1980. The objective is to double production of the basic petrochemical products (ethylene, ammonia, methanol, propene and aromatics), from an estimated 2m. tons this year to 4m. by 1980. The Government has given great importance in recent years to these products because of their considerable multiplying effects, as basic industrial inputs, on other sectors of the economy such as tyre manufacturing and plastics.

Two petrochemical "poles" have been set up in Brazil: the first and the largest in the Cabatão-Capuava area in the State of São Paulo; and the other in the State of Bahia, in the North-east, partly as a regional development measure. By the end of 1974, the ten companies with plants in São Paulo had invested $384.5m., which had produced only 3,176 permanent jobs, which gives the very high job/investment ratio of $121,064 per job. For this reason, it has been suggested that the petrochemicals industry was not the most suitable industrial sector to have been set up in the North east, a highly-populated region with a serious problem of urban unemployment.

Most of the petrochemicals projects have been set up in the form of joint ventures, with the participation of Petroquisa (a subsidiary of Petrobras, the State-owned oil giant), Brazilian-owned companies and multinationals. One example is Petroquímica de Camaçari S.A. in which Petroquisa has a 30 per cent. holding, Mitsubishi Chemicals and Nisho-Iwai a joint 25 per cent., and the remaining 45 per cent. is in the hands of private Brazilian companies. Due to the carefully arranged distribution of shares, both Brazilian capital (State plus private companies) and private enterprise (Brazilian and foreign private companies) have always had a majority share in the projects. However, in March this year, Dow Chemical announced that it is planning to set up a plant with an initial investment of at least $500m., to produce 400,000 tons of ethylene, probably in Bahia.

Foreign

Although the final details have not been released, it appears that Dow Chemicals will have a majority holding in this project, thus for the first time a foreign company will control a petrochemicals undertaking. If this is the case, the decision was probably the result of recent studies that indicate that plans for expansion will lead to a 740,000 ton annual deficit of ethylene in 1980. Even if Petroquisa doubles its ethylene production to 800,000 tons, as has been proposed in a study at present being examined by the Government, Brazil would still have a considerable deficit.

"There is now talk of setting up a third "pole," and states all over Brazil are vying for the honour, while the state of São Paulo is defending the viewpoint that the existing "poles" should be further developed.

Susan Branford

Steel output falls short

LIKE a car with its handbrake on, Brazil's steel industry is being driven hard but unsmoothly on the road to self-sufficiency. With half the industry short of coal and the other half short of finance, the country is lagging behind its plan to produce 23m. tons a year by the end of the decade, a figure that should more than fulfil its needs.

Although they have access to ample reserves of iron ore and manganese, Brazil's steel makers have been unable to keep up with the growth of the steel users, and particularly the building industry. Until this year, demand for steel has been rising by about 15 per cent. a year, three times the world-wide average. But production only managed a growth of 10 per cent. in 1973 and 5 per cent. in 1974. This left Brazil with a bill of $1.6bn. to pay for steel imports last year—almost a third of its trade deficit.

Opening

At the opening of the new congress in Brasilia, Sr. Severe Gomes, the Minister of Industry and Commerce, said investments of $10bn. would be needed to take the steel industry through the next ten years, including about $3bn. from private companies. Last year's production figure of 7.5m. metric tons was 700,000 below the Government target, and it seems unlikely that the companies will reach the hoped-for 9.6m. tons this year. This would still be over 3m. tons short of the expected level of consumption.

But the Government is still determined to halve the burden of steel imports, especially since the main import item—oil—cannot be coaxed downwards. Worried about the possibility of dumping from Japan and Europe, where idle car factories have accumulated stocks of sheet steel, it has imposed a form of import restriction, channelling contracts through Consider, its Non-ferrous Metals and Steel Council.

As it turns out, Brazilian production of flat-rolled steel—a province reserved for the big State-owned companies—actually declined in the first months of the year. Unlike the private companies, the flat steel producers depend on high quality mineral coal, which is increasingly hard to come by.

The country has proven coal reserves of 2.5bn. tons, but the high ash content makes it unsuitable unless mixed with imported coal. In order to conserve supplies, there used to be a legal maximum of one-fifth of Brazilian coal in steel furnaces, but the restriction was quickly dropped when the prices of U.S. coal shot up last year. The country's largest mill, at Volta Redonda north-west of Rio de Janeiro, is now using more than three quarters of Brazilian coal despite the loss in efficiency.

Negotiations are under way with Poland to swap Brazilian iron ore for Polish coal, and assistance in setting up steel production may be offered to Colombia on a similar basis. Plans for a coal agreement with Colombia fell through at the last moment a year ago, shortly after the countries had come into conflict over the admission of Cuba to the Organisation of American States.

Exploration for coal is being stepped up in Santa Catarina in the south, São Paulo and Piauí in the north-east. The Vale do Rio Doce iron ore company (CVRD) and Usiminas, the State-owned steel producer of Minas Gerais, plan to bypass the coal problem by building a 1m.-ton plant using a direct reduction process bought from Korf of West Germany, operating by the recycling of gases. And it is possible that the *babaçu* nut, a labour-wasting all-purpose fruit that grows in the north-east State of Maranhão, can be processed efficiently enough to provide coking coal for the planned steel mill at Itaqui, which will be joined by railway to the Serra dos Carajás ore deposits in the Amazon.

While the State-owned companies are unable to boost their production of flat steel, the government is urging increased growth in the remaining sectors of the industry, which are facing stronger demand. But, with the exception of one new plant being built in Minas Gerais, these companies are proving reluctant to invest in a difficult business climate. The situation has led to considerable soreness between private steelmakers and the Government on three issues.

Prices

Prices of steel products, which are controlled by the Government, are claimed to be too low to cover increased costs, particularly of labour. The producers also want special finance terms and exemption from monetary correction, which increases the cost of loans. The National Economic Development Bank has already limited the extent of monetary correction for steel companies to 20 per cent.

But the more important issue is the rumour that the State companies will move into the area occupied by the smaller steelmakers. The private and public sectors have led a Box and Cox existence, without competition, splitting the market between them. The Companhia Siderúrgica Nacional—the biggest Brazilian steelmaker—is 78 per cent. geared to flat-rolled products and has a monopoly in tinplate and galvanised sheeting. The second largest, Cosipa of São Paulo, makes nothing but flat steel, while the private companies make none.

However, given the difficulty with mineral coal, the demand for steel for construction and the reluctance of the private sector to invest, the state may now move across this borderline.

In any case, consolidation of the nationalised steel interests is likely over the year to reduce the private rôle. The State owns only five of 31 mills now operating, but controls 60 per cent. of the market.

The State's steel holdings are being regrouped under one holding company, Siderbrás, which has just received a hefty $500m. injection of capital. Siderbrás itself is taking a direct majority share in a joint venture with Kawasaki of Japan for a plant costing nearly $1bn. The Itaqui mill, which it is hoped will produce 4m. tons by 1980 and 12m. by 1985, will cost something in the region of $3bn., and CSN is studying a project for a 4m. ton steel plant at Santa Cruz, just outside Rio de Janeiro.

CSN, Cosipa and Usiminas hope to expand their production to 11.6m. tons in three years' time. The CSN mill at Volta Redonda is being extended under a $1.6m. investment programme, which will almost double the present capacity of 2.5m. tons, and Cosipa has a similar $860m. scheme for its plant at Cubatão in São Paulo state. The World Bank and the Inter-American Development Bank have chipped in with a large share of the finance for both projects.

Despite the present lag, there is reasonable hope that Brazil will achieve its ambition of being a minor exporter of steel by the end of the decade. It may do well in that situation. Compared with Japanese steel companies, for instance, labour costs are about half, and charges for pollution control—not yet high among Brazil's list of priorities—are minimal.

David White

Car profits hit

WITH THE AUTOMOBILE industry in Europe and the U.S. ever more deeply embroiled in crisis, the state of their subsidiaries in the developing world becomes a matter of increasing importance.

Production in Brazil last year reached 858,000 vehicles, of which 515,700 were cars. This was a 17.7 per cent. increase over the 1973 output figure and was a fairly satisfactory performance, although several of the companies actually registered losses on their operations.

The *increase in output* was sufficient to push Brazil into eighth place in world vehicle production, overtaking Spain for the first time. It is also by far the most important producer in South America; its nearest rival, Argentina, produced only 230,000 vehicles last year, a drop of 10 per cent. over the previous year's figure.

Historically, the vehicle manufacturing sector has played a *highly important role* in the Brazilian economy. Taken together, manufacturers of vehicles and vehicle parts directly employ some 400,000, which is about 12 per cent. of Brazil's industrial labour force; indirectly, as the multiplying effect of the industry has been very great, its constant and growing demand for industrial goods has stimulated many other sectors in the economy.

Skilled

The car industry has been highly important, too, in the formation of the country's industrial working class. As they are nearly all skilled or semi-skilled, the car workers form the elite of the country's labour force and earn the highest wages available in Brazil, even though these, by international standards, are still somewhat *low*: the 88,600 workers employed directly by Brazil's vehicle manufacturers in 1973 earned an average weekly wage of £28. Although strikes are strictly speaking against the law, the car workers are the most militant group of workers in Brazil, and are known to carry out sporadic go-slows (known as "operação tartaruga"—"operation tortoise" in English) and even wild-cat strikes. Last year, over 35 strikes occurred in the car industry, mostly protest strikes lasting a single day.

Volkswagen of Brazil dominates the industry; last year its share of total vehicle output was 53 per cent., and, with 419,000 passenger and estate cars, it improved its 1973 output by 15 per cent. Second came General Motors, with a 21 per cent. share in production representing 182,300 cars, lorries and vans. Ford was close behind with 179,000 vehicles (passenger cars, pick-ups vans and lorries), and next came Mercedes-Benz (37,500 lorries and buses) and Chrysler (31,500 cars and lorries).

Joint

Although the Brazilian Government is no longer in favour of additional manufacturers installing themselves in *the country with a view to producing cars*, when it is trains (or at least lorries, buses and tractors) that the economy really needs, Fiat (but not Renault), managed to get in just in time. In a 50-50 *joint venture* with the State Government, it is at present building its plant in Minas Gerais and talking ambitiously in terms of producing between 320,000 and 350,000 cars annually by 1978.

From what the chairman of Fiat said recently, the company believes it acted very late in the day: "We would have liked to have been operating in Brazil since 1968."

Indeed, many world car manufacturers (including the British *companies) must be surprised* at the level of car purchases in Brazil and regretting missed opportunities. Even if it is admitted that Brazil's population of over 100m. means that a much lower per capita purchase rate is economically viable, nevertheless there cannot be many countries where per capita income is still only £330 that produce annually one road vehicle per 130 inhabitants.

Part of the explanation must be the high priority that was given right from 1957, to stimulating demand for cars, even at the price of sacrificing railway developments, investments in health and education and other social welfare goals. Not that cars are at all cheap (the least expensive VW model costs about £1,500); it is rather that in Brazil the car has become an economic necessity and a status symbol to an extent that amazes most foreigners. In this context it is interesting to note that, according to VW, the rural regions are now the areas with the most rapidly growing demand for cars; and this is occurring despite the very low rural per capita income.

However, Fiat may discover that it has missed the golden period of car manufacturing in Brazil, for there are now signs that the industry is entering a difficult phase.

Overall vehicle production in the first quarter of this year was up by only 4 per cent.; that there was a rise at all was thanks to an increase in lorries and pick-ups, for output of passenger cars (*excluding knocked-down cars for export*) remained stationary. This relatively poor performance is in part the result of financial difficulties last year. Although total vehicle output rose substantially VW and General Motors, at least, showed losses on their car manufacturing operations, of £10m. and £8.9m. respectively; and Ford's level of profit was very low—£240,000. Some of these poor results, which were mainly caused by the rocketing cost of raw materials, were offset by high unspecified "other" profits, which mostly consisted of operations on the financial market. In this way, VW bettered its position by £16.3m., and Ford by £6m., that is, twenty-five times more than it earned from its manufacturing operations.

The most *impressive* achievement of all, however, was un*doubtedly Fiat's: its 1974 profits* in Brazil were £1.5m., coming from "financial operations on the open market and others," although they have not even started production here. On the other hand, General Motors probably had the worst performance (although not all of the companies have published their 1974 financial reports yet): it had an overall loss of £8.5m., although its output was up by 30 per cent.

One new direction towards which Brazilian car manufacturers are increasingly turning is the foreign market, particularly in other developing countries such as the rest of Latin America, the Middle East and Africa. So far the export drive has proved fairly successful. Last year, Brazil exported 60,000 complete and 45,000 knocked-down vehicles, earning about U.S.$228m., which represented 8 per cent. of its 1974 income *from the export of manufactured* goods. This year the target is a total of 120,000 to 140,000 complete and knocked-down cars, with a value of approximately U.S.$350m. The groups involved in this export drive are Ford, Chrysler, General Motors and chiefly VW, which, in addition to supplying parts to assembly plants in Portugal and Peru, will probably be involved in two more big projects outside the country. It will shortly be signing a contract to set up an assembly plant in Iraq, to which it will be supplying the parts to assemble 50,000 cars a year. It also has excellent prospects of winning a contract to supply parts to an assembly plant to be built in Chile.

Nonetheless, Herr Wolfgang Sauer has admitted that exports are still at what he prefers to call the "investment" stage—in simple terms, they are still making a loss. VW of Brazil is clearly anxious to stake its claim on the world market before all the opportunities are taken up. And, according to Herr Sauer, the Brazilian subsidiary by no means subordinates its export objectives to the interests of the head company: "VW of Brazil is an independent company that takes decisions in accordance with its own interests."

Difficult

In all, Brazil's car manufacturers are facing a difficult period. Last year some only kept up production increases by absorbing losses; this year the first signs are appearing that output for the domestic market, of passenger cars at least, will remain stationary. Despite its small and economical models, the problems are almost as great for VW as for the other companies, partly because it is the largest manufacturer and thus vulnerable, and partly because it has no other vehicles, besides passenger cars and pick-ups, to fall back on.

Even before Fiat creates additional headaches when it begins production next year of its economic cars, which will have the extra advantage of novelty, VW's Brazilian empire is beginning to show signs of strain. In a time-honoured reaction, the company is looking abroad to solve its internal difficulties. At present, the export drive is proving quite successful—but how long will it be before it starts paying off.

Susan Branford

Ambitious power plans

THE TOWN of Foz do Iguaçú, in the high forest where Brazil meets Paraguay and Argentina, used to be a place few people went to, except tourists on their way to the Iguassú waterfalls, drug peddlers, and car thieves heading for the Paraguayan border.

But in the past few months there has been a steady stream of jobless migrants into the town, attracted by the fame of the Itaipú dam which Brazil and Paraguay are starting to build on the Paraná River. Most of the migrants are still waiting for accommodation and work, but the town and the river will soon be transformed by the world's most ambitious hydro-electric project, an investment of over $4bn. Dwarfing even Grand Coulee in the U.S., the Itaipú complex should produce 12,600 MW from 1982 and eventually 20,000 MW, which is more than Brazil's total generating capacity at present.

New sources of electrical power are an overriding priority in Brazil's industrial growth. Itaipú, the most spectacular example, is going ahead despite the vociferous objections of the Argentinians, who want to exploit water power further down the Paraná and would rather see something more modest than a 700-foot dam the other side of the frontier, and despite the fact that it will mean flooding out the area known as the Seven Falls, one of Brazil's most splendid natural beauties.

Although contracts for the turbines at Itaipú have not yet been decided, the Brazilians and Paraguayans will probably rely heavily on the experience of both Canada and the Soviet Union, countries with similar resources and a similar problem of linking the sources of electric power with the centres of industry and population. Canadian interest in electricity in Brazil dates from the last century—the main power company in the São Paulo-Rio region is a Brascan subsidiary—and Canada is expected to take an active part in new hydro-electric ventures.

The abundance of renewable energy sources—which for the moment means water, although extensive use of solar energy is planned in the long-term—is a relief to a country that is still wincing from the effects of the oil crisis. The rise in prices has pushed Brazil's oil import bill up to more than $3bn. a year, while the country needs all the coal it can get for steel production.

Proportion

Water power is already responsible for four-fifths of the electricity supply, in contrast to the U.S., for instance, which uses the same proportion of thermo-electricity.

Even so, the network of Amazon tributaries, reaching down into the centre-west region of the country, is still largely untapped, and less than 15 per cent. of the estimated hydro-electric potential — 140,000 to 150,000 MW — is being used.

In order to forestall the growing threat of an energy shortage in the 1980s, the Government plans to throw enough resources into its hydro-electric programme to increase generating capacity to 50,000 MW in ten years' time, a growth of 250 per cent. The country's installed generating capacity was increased nearly 16 per cent last year and 11 per cent the year before. The 1974 increase included 1,246 MW in hydro-electricity, and it is hoped to expand this by nearly twice as much in 1975.

An important hydro-electric project at Sobradinho, halfway down the São Francisco River in the state of Bahia, is due to start operating in 1977, and Itaipú should, if it goes according to plan, be ready five years after that.

Meanwhile, other plants are being planned in the Amazon basin. Two rivers, the Araguaia and the Tocantins, have an estimated potential of 18,000 MW between them, and projects on the Uruguai and Trombetas rivers are being studied. On the Tocantins, two power plants have already been approved, one within easy reach of Brasilia and the link with the electrical system of the south-east.

The Brazilians are again looking to foreign technology for connecting further-outlying projects to the south-east, where excess production may be diverted. The industrial "axis" of São Paulo and Rio de Janeiro consumes more power than the bulk of Brazil's immense territory which lies to the north. The whole south-east region, where slightly less than half the population lives, uses up 70 per cent. of the electric output.

This concentration is even greater when one considers the rudimentary level of electrification in rural areas, even in the south-east, with the possible exception of São Paulo, which has the greatest resources to spend on rural development.

The harnessing of the rivers will provide the main part of the country's rapidly growing electrical needs well into the 1980s, when the hydroelectric contribution is expected to reach 85 per cent. From then on hydroelectricity will begin to cede ground as Brazil's nuclear programme comes into its own.

Nuclear

Under the auspices of a revamped nuclear authority, Nuclebrás, Brazil has started training nuclear engineers, aiming to take over a large part of production and processing activities in the 1980s.

The initial stage will be a series probably of nine or ten reactors, the first of which is now under construction at Angra dos Reis in up-country Rio de Janeiro. The 600-megawatt unit, a pressurised light water reactor bought from Westinghouse, will be followed by two others on the same site of 1,200 megawatts each. Contracts for these have not been signed, but they will be of the same type, using enriched uranium (also purchased from the U.S.)

The Government is on the point of signing an agreement with West Germany covering part of the initial stage, together with the setting-up of industrial capacity and design teams in Brazil, as well as the exploitation of uranium reserves.

Talks have been going on at the same time with both the U.S. and France, and one or other is expected also to co-operate on an extensive basis in order to increase the range of technology available for further stages of development.

Building Rio's new underground railway.

Brazil is several years behind Argentina in the nuclear field. The Argentinians are already building their second nuclear plant, while the first unit at Angra dos Reis will not come on stream until 1977. The two countries appear to have gone different ways, the Argentinians opting for heavy water reactors, using natural uranium and arguably affording a greater degree of technical independence, the Brazilians for the light water method.

The cost of Brazil's first series of reactors and the facilities for making parts for them is put by senior officials at $7bn. With further expansion in the 1980s and 1990s and the establishment of uranium enrichment facilities, estimates for the overall investment up to the year 2000 revolve around $40bn.

Brazil produces uranium [in] the central state of Min[as] Gerais, and more promisi[ng] deposits have been located [in] the Amazon region. Systemat[ic] work has only just begun, a[nd] it will take five to ten years [to] develop the deposits, by whi[ch] time Nuclebrás plans to ha[ve] its own concentration facilit[ies] to process uranium for expo[rt].

David Whi

Shipyard production booming

WHAT is probably one of the most expensive single pieces of metal ever made in Latin America sits waiting for delivery in a factory outside Rio de Janeiro: £33,000 worth of ship propeller, and there are more and bigger versions to follow. The Anglo-Brazilian company set up to make them already has guaranteed business for the next five years. Whatever, one wonders, happened to the shipbuilding crisis?

In seven years, Brazil has worked its way up from scratch into the top league of shipbuilders. This year it has made the Top Ten in Lloyd's Register for the first time, nipping into eighth place in front of such countries as Norway, Holland and Italy.

Helped by a strong domestic market and cheap labour costs, Brazil is now following the example set by Spain a few years ago, and is still riding high on the initial period of growth. In the first three months of this year, according to Lloyd's, no other country, except South Korea, showed an increase in shipping orders.

In March the Brazilian shipyards established their credentials as exporters with foreign contracts for 25 ships, at a price of $295m. Over three-quarters of the parts and machinery are now made in Brazil, and the biggest yards are now producing their own designs.

The industry is almost entirely the province of seven companies, headed by the subsidiaries of Ishikawajima of Japan and Verolme of Holland. These are the only companies that concentrate on large tankers and bulk carriers, largely for the Brazilian iron ore and oil companies whose growing demand shelters them from the weak world market. Vessels of 130,000 tons deadweight have already been constructed, and Verolme has contracts for up to 277,000 tons.

The Brazilian-owned companies continue to concentrate on small- to medium-sized vessels of between 7,000 and 40,000 tons. The largest, the Mauá shipyards in Rio de Janeiro, are making 16 ships a year of 15,000 tons or less and three of 37,000 tons. Unlike the foreign yards, they count on being able to sell 20 per cent. of production abroad. Export marketing is co-ordinated, and four companies—Mauá, Coneco, Emaq and Só—operate an agreement on licensing arrangements from abroad.

The Brazilian Navy runs its own shipyard in Rio de Janeiro, where it has been making frigates under an agreement with Vosper Thornycroft of the U.K. The agreement covers four Mark 10 frigates made by Vosper in England—of which two have been completed—and a further two made under licence in Brazil. The vessels will be adapted for anti-submarine and general use.

Specialised

The National Plan for the five years up to 1979 provides for a $3.3bn. shipping programme, under which Brazil should produce 5.1m. tons of ships and import a further 200,000—the latter being specialised vessels for which the country does not have the necessary technology.

Production at present has reached about 500,000 tons a year, but this is expected to double to a level of around 1m. tons in two years' time. On the basis of present contracts, at least one shipyard claims to be fully occupied up to 1979-80.

Now that the export phase has begun in earnest, Brazilian shipbuilding is now in a position where it can increase its autonomy. The main import item now is steel—a continuing problem, since the steel industry has been slowed down by the process of reorganisation—but turnover in ships is sufficient to justify local production of parts that previously had to be imported from the traditional shipping powers.

The propellers are an obvious example. The Birkenhead company of Stone Manganese Marine, one of the few companies working in the field, has up to now furnished most of Brazil's needs, but since late last year has joined with three Brazilian shipbuilding companies to make the same propellers in Brazil. Setting up local production facilities, at a cost of about £1m., gives the company—Helistone—an effective monopoly until another foreign company decides to do the same. Imports are now banned.

Local and foreign companies are meanwhile joining together to form a major ship repair outfit, Renave, which will have a capacity of up to 400,000 tons.

The growth of Brazil's shipbuilding industry has from the start been tied in with the expansion of the merchant fleet—a parallel policy conceived in 1967 with the aim of securing a greater Brazilian role in carrying the country's trade. Thus the shipbuilders need look less to the situation of world shipping than to the growth of Brazilian trade, which is somewhat over 25 per cent. a year at present. But there are fears that the merchant fleet cannot go on expanding for ever.

If the domestic market decreases, as some in the industry believe it will from about 1977, then the shipyards will not be sitting quite so pretty. The present growth is based on being able to sell 80 per cent. of production in Brazil, and the shipyards are not efficient enough to be heavily geared to export.

The Government plans to expand the merchant fleet to the extent that it can carry 40 to 50 per cent. of trade, although the target figure of 11m. tons by 1979 may on present trends not be sufficient.

Freight

At about 3.5m. tons, Brazil's merchant fleet accounts for less than 1 per cent. of the world's shipping, although it is the largest in Latin America after Panama. Last year the country spent about $1.6m. a day on freight rates, more than half to foreign flag carriers.

In bulk shipments, the Brazilian fleet accounts for less than a quarter of the total.

Apart from six private companies, which have onl[y] 600,000 tons of ships betwee[n] them, the Brazilian mercha[nt] fleet consists of three Stat[e]-controlled companies — Llo[yd] Brasileiro, Petrobrás (whi[ch] runs 37 tankers), and Docenav[e] the shipping arm of the Vale [do] Rio Doce iron ore grou[p]. Government investments in th[e] maritime sector in the last [...] years have been overshadowe[d] by the ambitious roadbuildi[ng] programme. With hindsight o[f] the energy crisis, many thin[k] this emphasis was a cost[ly] mistake. A trickle of trade sti[ll] uses the river network — an[d] there is a busy shipyard [at] Manaus, 1,000 miles up th[e] Amazon—but only a ti[ny] fraction of transport expendi[ture] has been dedicated [to] developing these facilities.

Coastal shipping is growi[ng] —the volume of goods carri[ed] increased 18 per cent. last ye[ar] —but remains relatively ineffi[cient], although the number of companies involved has bee[n] reduced from about 300 to 40.

The ports are notorious. Development has failed to keep u[p] with the spectacular growth i[n] trade over the past decade o[r] with technical innovations. Th[e] authorities are only beginnin[g] to think in terms of roll-on-rol[l]-off facilities, the domestic route[s] are cumbersome, and the inte[r]national ports such as Sant[os] and Rio de Janeiro clogged. [It] is said that, had there bee[n] harbours in Brazil when th[e] Portuguese navigator Ped[ro] Alvares Cábral discovered it [in] April, 1500, he would have ha[d] to wait until May to disembar[k].

David Whu

Textiles stagnation

THE BOOM era of Brazilian rubber petered out after 20 hectic years. The boom era of Brazilian textiles stagnated after four. Or so at least it seems at the moment.

Since the great expectations for Brazilian textiles started in 1969, it has become the biggest investment sector after steel and petrochemicals. The implantation of diverse, labour-intensive production units seemed ideal for Brazilian conditions, especially in areas such as the north-east where the industry could exploit locally-available raw materials such as cotton. The impetus was backed up by a general trend elsewhere to move textile production away from the industrialised to the developing countries.

Carried along on the spurt of economic expansion, and hopeful of a lucrative domestic market, industrialists committed themselves to heavy investments, which were backed up by Government incentives. From $53m. in 1969, investments increased 16 per cent. in 1970, then 54 per cent., 29 per cent. in 1972 and finally 228 per cent. in 1973, when it seemed that the industry would ride high on rising world prices and the possibility of shortages.

Exports of clothing and synthetics trebled in 1972 and again the following year. Overall textile exports in 1973 rose 123 per cent. to $325m., for the first time exceeding the combined cost of imported textiles and imported machinery to make them.

This year exports are unlikely to reach the 1973 figure. In the first three months the rate of foreign sales was less than half what it was at the beginning of 1974, before the industry realised just how vulnerable it was to changes in purchasing power.

Domestic consumption increased, but not as fast as the industry was growing. Between 1970 and 1974 production rose by about 48 per cent. to 1.1m. tons from 743,000, while the Brazilian market rose 36 per cent. to 600,000 tons from 440,000. There are indications, however, that Brazil's own consumption of textiles is beginning to rise again this year, especially since the recent round of pay increases which have helped to counter-balance some of the effects of inflation on people's pockets.

This is as yet little comfort to the industry. About 5 per cent. of the 350,000 people who were working in textile factories (there are an estimated 7,000 to 8,000 companies active in the sector) are now thought to be unemployed as a result of the sudden slump.

Overshot

The first warning signs that the textile industry might have overshot its potential market came in the second quarter of last year, although certain restrictions on expansion had already been imposed. From 1972, for instance, manufacturers who installed new equipment had to scrap most of the old machinery except in cases where most of the production was geared to export.

Investments in textile machinery suddenly dropped to $110m. last year from $400m. in 1973. As export orders for Brazilian textiles were cancelled, so manufacturers cancelled their orders for imported machinery, and the expensive equipment accumulated on the docks at Santos.

Last month the Government decided to step in more firmly and suspended investment incentives for textile production in the north-east, where all new industry is given speical benefits. The move was greeted with public sighs of relief in the industry, especially in areas not favoured by similar incentives.

Last year the northeast development authority, SUDENE, approved 13 new textile projects in the region, which because of the benefits given to incoming capital has otherwise tended to attract capital-intensive ventures which bring little employment.

The lifting of regional incentives, which also applies to electrical appliances, also fits in with the Government's policy of reducing imports of capital goods. In 1973 Brazilian textile companies brought in $159m. worth of equipment from abroad.

The Minister of Industry and Commerce, Sr. Severo Fagundes Gomes, is at the moment conducting a series of discussions with the various industrial associations in order to work out a new policy for further development of the industry.

The general view is that the worst year is now over, but looming over the industry's calculations is the growing series of import restrictions. There are fears that this will further affect its main export market in the U.S., with whom the Brazilians still have to agree on a new textile pact in conformity with recent rulings by GATT. The original pact, signed in 1970, applied quotas only to cotton goods, but the tariff rules require comprehensive agreements including wool and synthetics. The Brazilians are believed to be unwilling to accept quotas for artificial fibres and textiles, and to be pressing for bigger quotas for cotton materials.

British plans to step up surveillance of textile imports, announced recently by the Department of Industry, a[nd] concern about the possibility [of] similar moves elsewhere [in] Europe, where Brazilian texti[les] have only recently begun [to] compete with those from Ho[ng] Kong and Korea, have served [to] unsettle the industry st[ill] further.

While Brazilian clothes ha[ve] emerged on the racks [of] American and European sho[ps], Brazilian shoes have be[en] through a comparable peri[od] of growth with fewer tantru[ms]. The industry, which is conc[en]trated in three towns in [Rio] Grande do Sul and Sao Pa[ulo], doubled its production by [...] and starts from 70m. pairs [in] 1970 to some 140m. last ye[ar]. In cruzeiro terms this was [a] sixfold increase, and the grow[th] has continued so far this ye[ar].

The value of exports, 90 p[er] cent. of which are destined [for] the U.S., increased 15 tim[es] over in the same period, a[nd] Brazil sold 28m. pairs last ye[ar] —amply enough, for instance, [to] keep Canada from getting c[old] feet.

The imposition of tar[iffs] against Brazilian shoes in [the] U.S. has done little to deter [the] trend—although a more rec[ent] countervailing duty agai[nst] handbags has proved m[ore] worrysome to the leat[her] industry. Brazilian shoes rem[ain] competitive with those import[ed] from Spain and Italy, wh[ich] Brazil had been undercutting [by] 20 per cent. or more.

However, the shoe manuf[ac]turers have learnt the less[on] of depending on a single exp[ort] market in days when prot[ec]tionism is in the air. As p[art] of an extensive trade deal th[ey] have just launched themsel[ves] in the Soviet Union.

David Whi

FT SHARE INFORMATION SERVICE

**BRITISH FUNDS

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
		"Shorts" (Lives up to Five Years)				
15F	15A	Savings 3pc '65-75‡‡	98¾	9.1	3.04	9.59
1M	1S	Exch. 6½pc 1976‡‡	97½	23.1	6.65	9.53
15F	15A	Treasury 6½pc 1976‡‡	95⅞	9.1	5.71	9.25
1M	1S	Victory 4pc 1976‡‡	98½	23.1	4.08	—
14J	14D	Treasury 10½pc 1976‡‡	101¼xd	8.5	10.36	9.58
10M	10S	Treasury 6¾pc 1977‡‡	94½	3.2	6.61	9.63
15M	15S	Electric 3pc '74-77	91	6.2	3.30	8.47
28M	28S	Treasury 11½pc '77‡‡	102¼	17.2	11.23	10.24
15M	15N	Treasury 3pc '77‡‡	86¾xd	8.4	3.45	9.11
20J	20D	Transport 4pc '72-77	87¾xd	14.5	4.55	9.47
15M	15S	Treasury 9pc 1978‡‡	95¾	6.2	9.42	11.94
15M	15S	Treasury 9pc '78 'A'‡‡●	95¾	—	9.42	10.87
14J	14J	Treasury 10¼pc '78‡‡	98¾	—	10.65	11.05
28M	28S	Exchequer 5pc '76-78‡‡	85⅝	17.2	5.84	10.37
9M	9S	Treasury 11½pc '79‡‡	100¾	31.1	11.39	11.15
17M	17S	Treasury 3pc '79‡‡	77	10.2	3.90	9.63
28M	28S	Electric 4¼pc '74-79	79¼	17.2	5.35	10.29
1M	1N	Treasury 10½% '79‡‡	97¾	25.3	10.72	11.20
15M	15N	Electric 3½pc '76-79	77½xd	8.4	4.52	9.87
3M	3S	Treasury 9pc 1980‡‡	92½	27.1	9.77	11.11
		Five to Fifteen Years				
15J	15D	Treasury 3½pc '77-'80	74¾xd	9.5	4.66	9.89
15J	15D	Funding 5¼pc '78-80‡‡	79¼xd	9.5	6.60	10.58
15F	15A	Treasury 3½pc '79-81	73	9.1	4.86	10.03
15J	15J	Do 8¼pc '80-82‡‡	88½	9.12	9.95	11.71
17M	17S	Treasury 12pc 1983‡‡	100⅜	10.3	12.24	12.37
15J	15J	Funding 5½pc '82-84‡‡	72⅞	9.12	7.76	10.75
10J	10J	Treasury 8½pc '84-86‡‡	81¼	4.12	10.89	12.14
1M	1N	Funding 6½pc '85-87‡‡	66⅝	25.3	9.82	11.86
26J	26J	Treasury 7¾pc '85-88‡‡	71¼	20.12	11.28	12.80
1J	1J	Transport 3pc '78-88	41⅝	25.11	7.42	12.24
15A	15O	Treasury 5pc '86-89	50	10.3	10.11	12.75
		Over Fifteen Years				
15J	15D	Treasury 8¼pc '87-90‡‡	66½xd	9.5	12.32	13.42
5A	5O	Funding 5¾pc '87-91‡‡	50⅞	3.3	11.43	13.42
14J	14J	Treasury 12¾pc '92‡‡●	90⅛	—	14.28	14.45
15M	15S	Funding 6pc 1993‡‡	48⅝	6.2	12.65	14.04
17M	17N	Treasury 9pc '94‡‡	64⅝	10.4	13.98	14.53
1M	1N	Gas 3pc '90-95	30½xd	25.3	9.99	12.74
15M	15N	Treasury 12¾pc '95‡‡	87⅞	8.4	14.58	14.69
15M	15S	Treasury 9pc '92-96‡‡	65	6.2	14.24	14.69
1A	1O	Redn. 3pc '86-96	29¼	24.2	10.24	12.64
1M	1S	Treasury 8¾pc 1997‡‡	63	23.1	14.25	14.75
1M	1N	Treasury 6¾pc '95-98‡‡	48⅞	25.3	13.95	14.57
15J	15J	Treasury 9½pc 1999‡‡	66½	9.12	14.51	14.78
14J	14J	Funding 3½pc '99-04	28	9.12	13.09	13.87
5A	5O	Treasury 8pc '02-06‡‡	55½	3.3	14.61	14.74
10M	10S	Treasury 5½pc '08-12‡‡	39	3.2	14.54	14.64
26J	26J	Treasury 7¾pc '12-15‡‡	55	20.12	14.73	14.31
		Undated				
1F	1A	Consols 4pc	27½	27.12	15.24	—
1J	1D	War Loan 3½pc‡‡	23⅝xd	25.4	14.78	—
1A	1O	Conv. 3½pc '61 Aft.	24⅞	24.2	14.38	—
5A	5O	Treasury 3pc '66 Aft.	20⅛	3.3	15.23	—
5J.A.J.O.		Consols 2½pc	16⅝	3.3	15.13	—
1A	1O	Treasury 2½pc	16¼	24.3	15.27	—

**INTERNATIONAL BANK

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
15F.	15A.	5pc Stock '77-82	65½	17.1	7.80	12.70
31J.	31J.	8pc Stock 1975	96	31	8.33	11.65

**CORPORATION LOANS

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
1F.	1A.	Birm'ham 9¼pc '79-81	64¼	2.2	11.35	13.78
1F	1A	Bristol 6½pc '75-77	91	17.1	7.14	12.49
30J	31D	Essex 5½pc '75-77	87	29.11	6.32	12.70

COMMONWEALTH & AFRICAN LOANS

LOANS (MISCEL.)

FOREIGN BONDS & RAILS

AMERICANS

S.E. List Premium 85¼% (based on $2.3245 per £)

CANADIANS

S.E. List Premium 85¼% (based on $2.2916 per £)

Conversion factor 0.5402 (0.5458)

††BANKS AND HIRE PURCHASE

Hire Purchase, etc.

BEERS, WINES AND SPIRITS

BUILDING INDUSTRY, TIMBER & ROADS

BUILDING INDUSTRY—Continued

CHEMICALS, PLASTICS

CINEMAS, THEATRES AND TV

DRAPERY AND STORES

DRAPERY AND STORES—Continued

ELECTRICAL AND RADIO

ENGINEERING, MACHINE TOOLS

ENGINEERING—Cont.

FOOD, GROCERIES, ETC.

HOTELS AND CATERERS

HOTELS—Continued

INDUSTRIALS (Miscel.)

INDUSTRIALS—Continued

INDUSTRIALS—Continued

INSURANCE

MOTORS, AIRCRAFT TRADES

Motors and Cycles

Commercial Vehicles

Components

Garages and Distributors

NEWSPAPERS, PUBLISHERS

PAPER, PRINTING, ADVERTISING

PROPERTY

PROPERTY—Continued

SHIPBUILDERS, REPAIRERS

SHIPPING

SHOES AND LEATHER

SOUTH AFRICANS

TEXTILES

TOBACCOS

TRUSTS, FINANCE, LAND

Investment Trusts

TRUSTS—Continued

Finance, Land, etc.

OILS

RUBBERS AND SISALS

TEAS

India and Bangladesh

Sri Lanka

Africa

MINES

CENTRAL RAND

EASTERN RAND

FAR WEST RAND

O.F.S.

FINANCE

DIAMOND AND PLATINUM

CENTRAL AFRICAN

AUSTRALIAN

TINS

COPPER

—	—	Botswana RST R2	75	—	—	—	—
June	Dec.	Messina R0.50	375	25.11	†Q60c	2.9	‡

MISCELLANEOUS

—		Burma Mine 17½p	[illegible]	19.5	m0.5	—	1.7
—		Charterhall 5p	5½	3.67	—	—	—
—		Colby Mines $1	75#	—	—	—	—
Aug.	Feb.	Cons. Murch. 10c	720	24.12	Q150c	2.2	11.6
—	—	Laurasia	41½	—	—	—	—
—		NFD $1	16	—	—	—	—
July		Northgate C$1	3[illegible]0	30.9	Q55c	1.0	8.5
Jan.	June	R.T.Z.	198	21.4	19.9	4.4	3.9
—		Sabina Inds. C$1	11½	—	—	—	—
—		Stamford Mines [illegible]	62	—	—	—	—
—		Tara Exptn. $1	£12	—	—	—	—
—	—	Yukon Cons C$1	67	11.65	—	—	—

NOTES

Unless otherwise indicated, prices are in pence, denominations are 25p and dividends are in net percentage terms. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half yearly figures; they are adjusted to corporation tax of 52 per cent. and ACT of 35 per cent. P/Es are calculated on the basis of net distribution; bracketed figures indicate 10 per cent. or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution. Yields, assuming maintenance of net dividends on current rate of ACT, are based on middle prices, are gross and allow for value of declared distributions and rights. Securities with denominations other than sterling are quoted inclusive of the investment dollar premium.

- ▲ Sterling denominated securities which include investment dollar premium.
- ● "Tap" Stock.
- • Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
- † Interim since increased or resumed.
- ‡ Interim since reduced, passed or deferred.
- ‡‡ Tax-free to non-residents.
- ϕ Figures or report awaited.
- †† Banks and Insurance reserve allocations may preclude calculation of dividend cover.
- # Price at time of suspension.
- ¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividend or forecast.
- •• Free of Stamp Duty.
- ♦ Merger bid or reorganisation in progress.
- ♣ Not comparable.
- ♦ Same interim: reduced final and/or reduced earnings indicated.
- § Based on 1973 profits.
- ? Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ★ Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
- ♥ Excluding a final dividend declaration.
- ♣ Regional price.
- ‖ No par value.

a Tax free. b Figures based on prospectus or other official estimate. c Cents. d Dividend rate paid or payable on part of capital; cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. r Australian currency. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. v Tax free up to 30p in the £. w Yield allows for currency clause. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment

A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Issue price. G Assumed dividend and yield after pending scrip and/or rights issue. H Figures based on prospectus or other official estimates for 1973-74. Q Gross. T Figures assumed. U No significant Corporation Tax payable. Z Dividend total to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xc ex capital distribution.

"Recent Issues" and "Rights" Page 31

This service is available to every Company dealt in on Stock Exchanges throughout the United Kingdom for a fee of £285 per annum for each security

FINANCIAL TIMES

Tuesday May 27 1975

Dublin silent over troops

BY DOMINICK J. COYLE

DUBLIN, May 26.

THE IRISH Government to-day declined to comment publicly on speculative reports, denied formally last night by Whitehall, that the British Government had given a commitment to the Provisional IRA to withdraw its troops from Northern Ireland. However, Dublin may seek private assurances from London that the reports have no foundation.

The "troops out" speculation, which received extensive coverage in all Dublin and Belfast newspapers to-day, stemmed from an interview here yesterday on the State radio station with the Rev. William Arlow, a Northern Ireland clergyman who had earlier been involved with other northern churchmen in peace talks with the Provisionals.

Reasons

Mr. Arlow would not expand on his assertion that a "firm commitment" on the withdrawal of British troops from Ulster had been passed to the IRA by the British Government. But when pressed by the interviewer, he said: "All I can say is that I have reason to believe this will happen. I cannot add to that statement, or take from it."

Mr. Arlow's understanding of the alleged British scenario appears to be based on the assumption now gaining support with practically all political groups north and south of the Irish border, and in Britain, that the present Ulster constitutional convention will fail to isolate any mutually acceptable political formula for the future government of the province.

Once this was shown to be the case, according to Mr. Arlow, the British Government would begin a programme of withdrawal. "They would do what the Americans call a Vietnam. They would pull out. They could say—we have given these people an opportunity to solve their own problems and they have not taken it. We cannot continue that commitment of money and troops."

In a one-sentence statement last night, Mr. Merlyn Rees, Secretary for Northern Ireland, said: "There is no truth in the statement made by the Rev. Mr. Arlow concerning an alleged agreement about the withdrawal of British troops from Northern Ireland."

Mr. Rory Brugha, the Opposition spokesman here on Northern Ireland, said to-day that he did not think Mr. Arlow's assertion about a British withdrawal commitment was correct, while Dr. Garret Fitzgerald, the Foreign Minister, is understood to have specifically rejected a request by the State radio to comment on the matter.

Meeting

Our Belfast correspondent writes: Despite the strong denial from Mr. Merlyn Rees, Mr. Arlow's week-end comments on radio have caused a stir in Ulster's political circles.

Mr. Harry West, Official Unionist Party leader, is trying to arrange a meeting with the Prime Minister in London to-morrow and the Democratic Unionist leader, Rev. Ian Paisley, has called on Ulster men to prepare to establish and defend their own Government if Britain withdraws.

Mr. Paisley said: "The stern fact is that as far as the IRA is concerned the Convention has already broken down. No solution which the Convention comes up with, short of a united Ireland, will satisfy them."

Mr. John Hume, deputy leader of the SDLP, said it was known that the British troops were going to be withdrawn, but the question remained, when and in what circumstances.

Cabinet in Lebanon quits after 3 days

BY IHSAN HIJAZI

BEIRUT, May 26.

THE THREE-DAY-OLD military Cabinet of Lebanon resigned to-day in face of massive pressure by Moslem leaders and Left and Centre groups.

The resignation came after the eight-member Cabinet held its first meeting to-day under President Suleiman Franjieh. Premier Brig. Gen. Nureddin Rifai later announced that he and the Ministers had submitted their resignation, and the President had accepted it but had asked them to stay on in office until a new Government was formed.

In his letter, Brig. Gen. Rifai said his Cabinet came for a specific mission, and that the mission of the next Cabinet will be easier.

Minutes after the news was announced over the Lebanese radio, the city echoed to the sound of guns being fired in the air by jubilant armed men in control of the Moslem districts of the capital.

When the Cabinet was formed on Friday night, it was the armed members of the Right-Wing Phalangist Party who fired their guns in jubilation.

Armed men continued to man barricades and roadblocks, and fighting flared up again last night between Phalangists and Palestinian commandos despite new measures at calming the situation.

Through the mediation of Mr. Abdel Halim Khaddam, Syrian Vice-Premier, and airforce commander Major General Naji Jamil, the joint Palestinian-Lebanese Co-ordination Committee met yesterday and more joint patrols were formed to bring the situation into check.

However, to-day's resignation takes the political situation back to square one. Efforts are continuing here to ensure a consensus Prime Minister and a new Parliamentary Cabinet.

Moslem leaders have insisted on 53-year-old Rashid Karami, the deputy from Tripoli who had served as Premier in the past, to head the Government. But certain Christian leaders, such as former President Camille Chamoun, have objected, and nominated Mr. Saeb Salam, another ex-Premier, instead.

Mr. Khaddam has decided to stay here for another day to try to bring about a compromise among the politicians on the next Cabinet. He and Gen. Jamil came here on Saturday.

Observers here do not expect the formation of a new Government to be easy, but one formula being proposed is to keep out both the Leftists and the Phalangists.

The military Cabinet's resignation is also welcomed by the Palestinian guerillas, who had seen in it an attempt by the authorities to suppress the movement here.

Meanwhile, another border incident between Lebanon and Israel was reported to-day. A military spokesman here said an Israeli force of 100 men entered the woods outside the Lebanese border village of Alta al Shaab but were driven off by Lebanese artillery.

The Israelis returned the fire but there were no Lebanese casualties, the spokesman said. Alta al Shaab was the scene of heavy fighting between Lebanese and Israeli forces yesterday.

Richard Johns writes: After the military Cabinet's brief three-day existence in nominal power the Lebanese State appears as paralysed and impotent as ever in the face of the worst communal strife in the country since the army's show-down with Palestinian commandos in 1969.

There is no doubt, however, that in the present crisis, which began with the fighting between the Phalangists and Palestinians last month, the delicate communal balance is in greater danger with the clearly implied threat of a Syrian intervention on the side of the commandos.

In Damascus, reports **Louis Fares**, the belief in informed circles is that the formation of a joint Syrian-Palestinian political and military command—as proposed by President Assad on March 8—should be expected very soon.

Damascus's strong disapproval, as well as the opposition of the Moslim community and the Left-wing led by Mr. Kamal Jumblatt (a Druze), would have been a major factor behind the resignation of Brigadier Rifai's Cabinet.

New border battle, Page 5

Cancer treatment 'advance' by Hoechst

By David Fishlock, Science Editor

FRANKFURT, May 26.

MAJOR ADVANCES in the treatment of two of the most prevalent diseases of Western civilisation, cancer and dental caries, are claimed by the German chemical group Hoechst to-day.

A new way of treating cancer with a chemical and technique refined by its research laboratories, already shown to have a 90 per cent. rate of success with breast cancer in dogs, has just begun trials on terminally sick cancer patients.

For dental caries, the company has developed a vaccine to protect teeth against the disease, and hopes to be ready to inoculate schoolchildren in two years.

Worldwide

The claims are made in a review of Hoechst's DM800m. (£150m.) research and development effort worldwide. The chairman, Dr. Rolf Sammet, describes the research as his company's most important strategic investment for the future, comparable in size with the sum set against depreciation (DM1.26bn.) and with group profits (DM641m.) last year.

In 1973, one-third of company sales derived from products which did not exist a decade earlier, said Dr. Sammet. More than one-third of its research expenditure was now being devoted to drugs.

The new treatment for cancer has come from a discovery that certain tumours such as breast cancers are encapsulated in a film of carbohydrate which prevents the body's natural defences from recognising the tumour as "foreign tissue" and rejecting it.

Hoechst research workers have discovered that an enzyme produced as a by-product of its cholera vaccine manufacture can be used to "unmask" the tumour by eating away the carbohydrate film. The tumour antigens are thus exposed and destroyed by antibodies.

Clinical trials on dying cancer patients have just begun at three U.S. medical centres. The treatment on which scientists with the Hoechst subsidiary, Behringwerke, have been working for four years, moved quickly into the clinical trials through a loophole in the drug regulations. The chemical is not being administered but is being used to treat cells first removed from the patient and then restored to him.

Successes

The same research team, under Professor Hans Schwyck, is developing a caries vaccine to protect teeth against the streptococcal bacteria responsible for the disease. Recent successes in purifying the vaccine have accelerated their plans and they now hope to have two versions ready for clinical trials on primary schoolchildren by 1977.

One will be an intramuscular injection and the other an injection into the gum.

THE LEX COLUMN

Entering the era of indexation

"Many of my constituents and many more people in this country would be more baffled by an indexing system, which they would find difficult to comprehend—at least for some time." Mr. Robert Sheldon, Minister of State, the Treasury, Hansard, May 20.

Perhaps Mr. Sheldon will get an indication of just how baffled people may be when the index-linked National Savings schemes get under way (though in fact he was talking about indexation of the tax system rather than of savings). The Retirement Certificates, already dubbed geriatric bonds, go on sale next Monday, and any male of at least 65 or female of 60 or more can buy £500 worth. In all 9.3m. people are eligible. The new inflation-proofed SAYE scheme, open to all people over 16, with a maximum investment of £20 a month, will be launched on July 1.

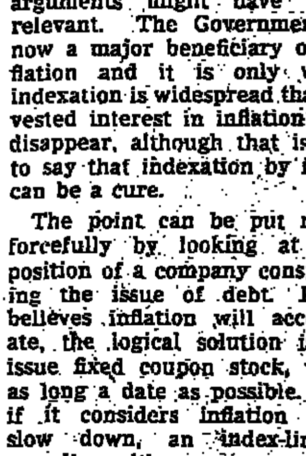
Dangerous rival

The building societies are so embarrassingly full of cash at present, and so anxious to avoid charges that they are regenerating the house price spiral, that the index-linked competition may not seem quite so dangerous to them now as it did a few months ago. But the longer term challenge remains. And the Government must be very nervous of the consequences should its limited experiment in indexation become over-popular.

Any general trend towards the inflation-proofing of debt would, of course, be wildly expensive for the Government and other borrowers. With inflation moving towards an annual rate of at least 25 per cent., which is the likely change in the Retail Prices Index, over the year to mid-May, investors are losing purchasing power at a staggering rate. On gilt-edged securities, for instance, which were capitalised at £21.4bn. at the end of March, the real loss is currently some £2.5bn. on an annualised basis. The equivalent purchasing power shortfall on £20bn. of building society shares and deposits is £2.7bn.

This situation can exist, and indeed become more extreme, because the institutional rigidities in the U.K. capital market are very pronounced. Savings institutions are committed to preserving the system rather than adjusting to inflation; thus building society advertising can claim that people are clever to invest at a nominal 7 per cent., and the insurance companies can concentrate on matching monetary liabilities against monetary assets, almost regardless of the real return to their policyholders.

Insurance companies typically argue that indexation will tend to make it harder for the Government to bring inflation under control; for it builds inflation into the economy, and damages the value of existing fixed interest securities. Unfortunately we have now gone



beyond the stage where those arguments might have been relevant. The Government is now a major beneficiary of inflation and it is only when indexation is widespread that its vested interest in inflation will disappear, although that is not to say that indexation by itself can be a cure.

The point can be put more forcefully by looking at the position of a company considering the issue of debt. If it believes inflation will accelerate, the logical solution is to issue fixed coupon stock, with as long a date as possible. But if it considers inflation may slow down, an index-linked security—with a coupon which might be 3 per cent., as GKN was considering last year—would make sense. What has shut companies out of the U.K. bond market is the fear that an end to inflation might leave them paying a crippling 20 per cent. real interest rate; in contrast, the Government is still selling long gilts, and it ought to know more about future inflation rates than companies.

It is certainly very unwise to assume that prices are going to be brought under control in the near term. Mr. Healey said in his Budget speech that if U.K. inflation fell to the average level of our trading partners he would regard that as a justification for reflation. Politicians could present a 10 per cent. rate as a major achievement.

At least the accountants are ready with their inflation accounting standard, but to a large extent the City appears to be waiting for some kind of breakdown to dictate events. The pension funds are in the front line, of course, but they have been let temporarily off the hook by the equity revival this year.

Even without any extension of indexation for the moment it is time for some careful thinking about how it should be put into practice. These days, it seems, investors are regarded as fair game by governments, and it is important to be sure that the new system would not also be worked against the interests of savers; the main danger is that index-linking and inflation-proofing might not always amount to the same thing.

The fact that the Retirement Certificates are valued on the previous month's RPI, for instance, could even in present conditions be leaving holders some 4 per cent. out of pocket (the April Index rose 3.9 per cent.) should they try to encash; in extreme inflationary circumstances this kind of lag might leave them virtually locked in.

Perhaps this is alarmist thinking. But we have already seen from last summer's 8.4 per cent. false dawn—when food subsidies and a cut in indirect taxes were used to depress the Index—that juggling with the cost of living can be a serious matter. Should the RPI become a significant factor in the cost of servicing the national debt there would be even stronger pressure upon Chancellors to load any indirect tax increases upon items which carried a low weighting in the Index. Worse still, in siege economy conditions goods might become almost unobtainable at officially controlled prices. That would make it essential for the representatives of savers to have some say in the calculation of the Index.

West to seek new oil talks

BY ROBERT MAUTHNER

PARIS, May 26.

THE MAJOR industrialised nations begin an important series of meetings here to-morrow which are expected to lead to an offer to resume their dialogue with the oil producers and developing countries—though not necessarily on a basis which the latter will accept.

There will be two main gatherings in Paris over the next three days: the first meeting of the International Energy Agency (IEA) at Ministerial level since its creation six months ago, which takes place to-morrow, and the two-day annual meeting of the OECD Ministerial Council, beginning on Wednesday.

Most of the participating countries will be represented by their Foreign Ministers, including Dr. Henry Kissinger of the U.S. and Mr. James Callaghan of Britain, and several of the most important by their Finance or Economics Ministers, including Mr. Denis Healey, the Chancellor of the Exchequer.

The two meetings can hardly fail to overlap since they will both be dealing with energy and other commodity problems. A link between these two issues was established by the producers and developing countries at the abortive producers/consumers preparatory meeting in Paris last month, but rejected by the consumers who wanted oil and "energy-related" problems to be discussed separately.

At the time, it was generally assumed that neither the U.S. nor Algeria, the respective leaders of the two camps, were genuinely interested in moving on to a full-scale conference between oil producers and consumers, except on their own very specific terms.

Over the past few weeks, however, there has been a significant softening of the consumers' position and notably that of the U.S., a development which some observers have attributed to the set-backs American policy has suffered in the Far East.

In his Kansas City speech two weeks ago, Dr. Kissinger proposed both that the producers/consumers preparatory meeting should be reconvened and that there should be parallel steps to help the raw materials producing countries, such as case-by-case commodity agreements, market stabilisation measures and the creation of a world-wide system of food reserves.

Dr. Kissinger's proposals, which he is expected to explain in greater detail at the IEA and OECD meetings, followed hard on the heels of a six-point plan for a "general agreement on commodities" put forward by Mr. Harold Wilson, the Prime Minister, at the Commonwealth Conference in Jamaica at the beginning of this month. Some attempt will, no doubt, be made to marry the two schemes by the OECD Ministers.

On Thursday, the various Foreign Ministers will move on to Brussels for the Nato Summit meeting, at which President Ford is expected to assure America's partners that events in Vietnam have not in any way undermined his country's determination to stand by its European allies.

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Co-op sees role for future 'Meridens'

BY SANDY McLACHLAN

WORKERS CO-OPERATIVES such as the Meriden experiment could in the future be incorporated into the existing co-operative movement, as could some private companies. This is implied in one of the proposals put forward by the Co-operative Union to the Department of Trade.

The union is the central body of the 231 retail Co-op societies whose sales last year totalled £1.7bn. Last July, it was asked to submit its views on what form the Government's proposed Co-operative Development Agency—which would use public funds to aid the development of the movement—should take.

At the Co-op annual congress in Edinburgh yesterday, Mr. Hen Parry, chairman of the union, said that one of the proposals put forward was that the activities of the CDA should extend "far beyond" the development of the existing retail Co-op movement.

Mr. Parry told delegates that the union recommendations included grants and loans by the CDA. These could be applied to the development of new Co-ops, the conversion of existing limited companies into co-operative units, and promoting mergers between existing societies.

However, it is not clear how quickly the Government intends to move on its plans for setting up the agency. According to Mr. Parry, the union's proposals were submitted last December, and apart from a brief acknowledgement, nothing has been heard since on the subject from the department.

To-day, the conference will discuss the proposed merger between the union and the Co-operative Wholesale Society whose manufacturing and distribution interests make it the U.K.'s tenth largest business.

Men and Matters Page 16

A meeting of mines

Two teams of miners have tunnelled three quarters of a mile in a record 33 weeks to link the Ireland and Markham collieries in North Derbyshire.

Under a £9m. scheme, all coal will now surface at Markham.

Talks on more orders for Airbus

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

TOULOUSE, May 26.

NEGOTIATIONS ARE now in progress for further orders for the European A-300 Airbus, and the manufacturer, Airbus Industrie, hopes to be able to win orders from at least five or six new customer-airlines over the next six months.

The main sales attack is now being concentrated upon the Far East, Australasia, South-East Asia and Africa, where there are many airlines with emerging requirements for short-haul high-density aircraft of the twin-engined Airbus type.

Airbus Industrie is not ignoring Europe, however, and is discussing the aircraft with several major airlines, including British Airways, which may at some future date have a requirement for a short-haul Airbus variant using the Rolls-Royce RB-211 engine, in place of the existing General Electric CF-6 engines.

During a visit to the Airbus Industrie facilities here, it was made clear to me that the company, set up by the French and West German Governments to build the Airbus, is growing in confidence now that the aircraft has entered service with Air France, Air Siam and Trans European Airways.

Hawker Siddeley Aviation of the U.K. is associated with Airbus Industrie, building the wings for all the Airbuses and having an overall design consultancy role on the project. As a result, several thousand U.K. aerospace workers benefit from the success of the Airbus.

Strengthened

So far, there are firm orders for 22 Airbuses, with options on another 19. Airbus Industrie has been given authority by the French and German Governments to build up to 68 aircraft, which it is currently doing at the rate of about 1½ a year, with the rate planned to rise to 2½ a year, or two a month, by the end of 1975.

Airbus Industrie sees a market potential for about 800 aircraft in the high-density short-haul area by the 1980s, of which it hopes to capture several hundreds, although it admits that the competition from such companies as Boeing of the U.S. is tough.

As part of its plans to meet this competition, Airbus Industrie has just strengthened its management team, headed by Mr. Bernard Lathiere as president.

Mr. Dan Krook, formerly marketing director and executive vice-president of Fokker-VFW International, has been appointed commercial director and senior vice-president of Airbus Industrie, and he will be responsible for pushing the sales of the Airbus in the years immediately ahead.

Weather

U.K. TO-DAY

MOSTLY dry and sunny; some drizzle on N.E. coasts.

E. Anglia, E. England
Cloudy at first; sunny later. Wind N.E., moderate. Max. 17C (63F) in W., 14C (57F) in E.

London, S.E., Cent. S., S.W. England, Channel I.
Mostly sunny. Wind N.E., moderate. Max. 17C (63F).

Midlands, S. and N. Wales, N.W. England, Lakes, I. of Man, Cent. N. England, N. Ireland
Sunny spells. Wind N.E., moderate. Max. 16C (61F).

N.E. England, Borders, Edinburgh, Dundee, Aberdeen, Cent. Highlands, Moray Firth
Cloudy, chance of drizzle. Wind N.E., moderate. Max. 10C (50F).

S.W. Scotland, Glasgow, Argyll, N.W. Scotland
Sunny spells. Wind N.E., moderate. Max. 15C (59F).

N.E. Scotland, Orkney, Shetland
Mostly cloudy, drizzle. Wind light, N.E. Max. 9C (48F).

Outlook: Little change in N.E.; chance of showers elsewhere.

BUSINESS CENTRES

		Y'day mid-day °C	°F			Y'day mid-day °C	°F
Alexandria	F	31	88	Luxembg.	C	17	63
Amsterdm	S	18	64	Madrid	F	19	66
Athens	S	25	77	Manchestr	S	14	57
Bahrain	S	35	95	Melbrne.	S	14	57
Barcelona	S	18	64	Mexico C.	S	20	68
Beirut	S	27	81	Milan	C	16	61
Belfast	S	16	61	Montreal	C	15	59
Belgrade	F	22	72	Moscow	C	12	54
Berlin	F	17	63	Munich	C	15	59
Birmghm	F	15	59	Newcastle	C	9	48
Bristol	F	15	59	New York	C	16	62
Brussels	F	17	63	Oslo	S	20	66
Budapest	F	20	68	Paris	C	15	59
B. Aires	C	17	63	Perth	S	23	73
Cairo	S	33	92	Prague	C	12	54
Cardiff	F	15	59	Reykjavik	C	10	50
Cologne	C	18	64	Rio de J'o	S	24	75
Copnhagn	F	15	59	Rome	F	21	70
Dublin	S	13	55	Singapore	R	28	82
Edinb'gh	C	11	52	Stockholm	F	15	59
Frankfurt	C	16	61	Strasbourg	C	16	61
Geneva	R	10	50	Sydney	S	18	64
Glasgow	S	13	55	Tel Aviv	S	26	79
Helsinki	F	14	57	Tokyo	C	20	68
H. Kong	S	28	82	Toronto	S	25	77
Jo'burg	S	21	70	Vienna	C	17	63
Lisbon	F	19	66	Warsaw	C	17	63
London	C	15	59	Zurich	C	16	61

HOLIDAY RESORTS

		Y'day mid-day °C	°F			Y'day mid-day °C	°F
Ajaccio	F	20	68	Jersey	R	11	52
Algiers	F	22	72	Las Palms	F	22	72
Biarritz	S	15	59	Locarno	R	13	55
Blackpool	S	17	63	Majorca	F	20	68
Bordeaux	C	17	63	Malaga	S	20	68
Boulogne	S	14	57	Malta	S	22	72
Cape Tn.	C	19	66	Nairobi	C	22	71
Casablnca	C	20	68	Naples	F	21	70
Corfu	S	26	79	Nassau	C	26	79
Dubrovnik	C	21	70	Nice	S	18	64
Faro	S	19	66	Oporto	C	16	61
Florence	C	16	61	Rhodes	C	26	79
Funchal	F	20	68	Salzburg	F	18	64
Gibraltar	S	20	68	Tangier	F	19	66
Guernsey	C	11	52	Tenerife	S	17	63
Innsbruck	F	19	66	Tunis	F	21	70
Inverness	S	10	50	Valencia	F	20	68
Istanbul	F	24	75	Venice	F	21	70

S—Sunny; F—Fair; C—Cloudy; R—Rain

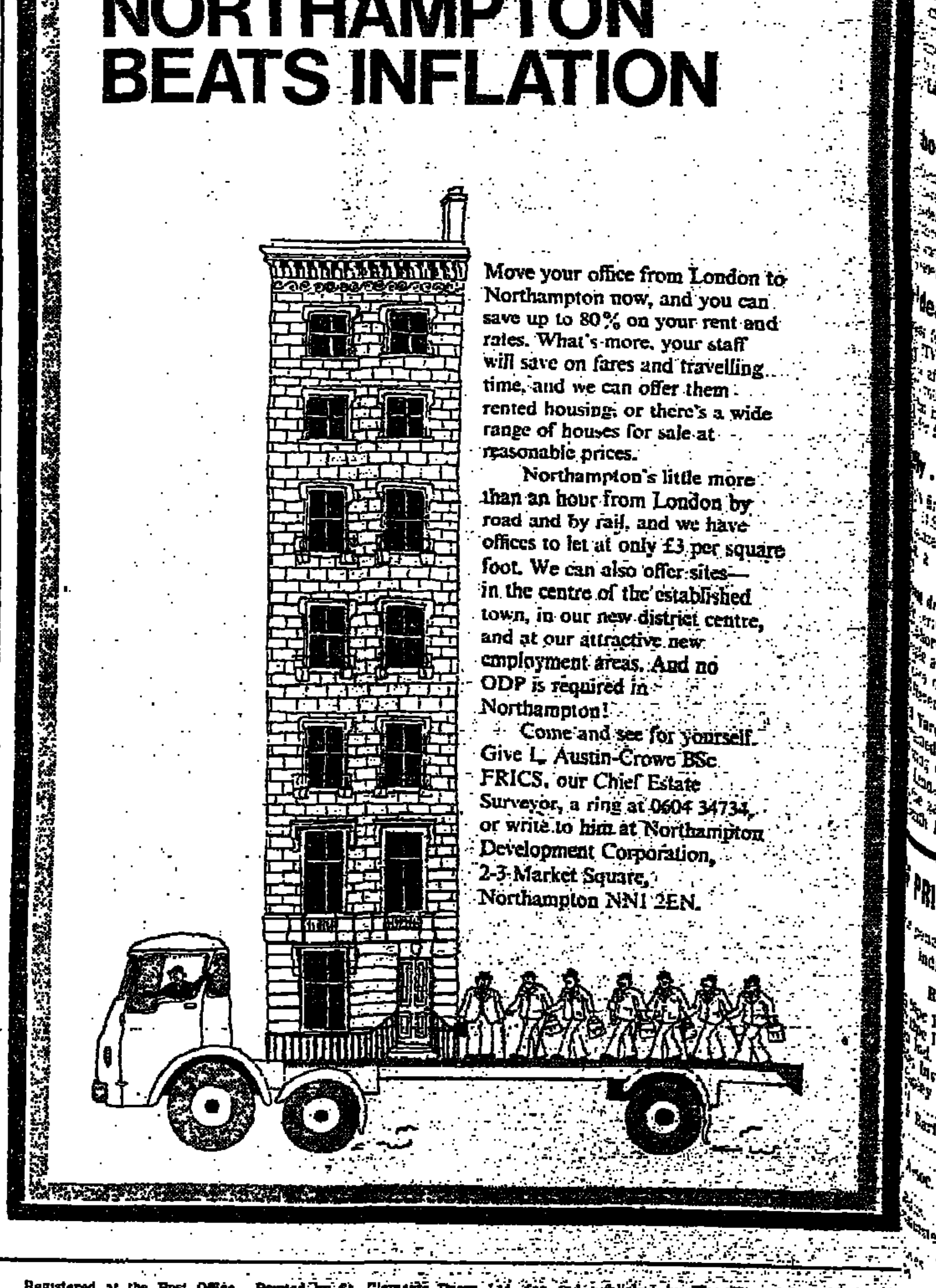
Continued from Page 1

Benn sticks to EEC jobs loss claim

sparked off speculation about his political future by saying in Edinburgh that "as one reaching the end of my active political life" he thought it right to say what in his view was best for the country.

Speculation immediately centred on whether it was just a passing phrase of a man who is 63 and has held most of the senior offices of State or whether he is contemplating giving up the Foreign Secretaryship in the near future.

But yesterday Mr. Callaghan went out of his way to stop all speculation about an early retirement. A statement was issued on his behalf stressing that it was "out of the question that he would retire from politics this year, next year or the year after that." Mr. Callaghan had been speaking simply as a man who had been an MP for 30 years.



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